PC communication module/utility
Working under Windows for

QT-6000/6100, QT-6600
SE series

Ver4.30 Jan 29 2010

Revision History of this document

Document Ver4.30 rev1.0

New features

- Support SE-C6000/S6000.

Document Ver4.20 rev1.0

New features

- Support XZ file format including AUTOPGM Fields.

Document Ver4.10 rev1.0

New features

- Support SE series.
- Up to Ver4.01, the key “PASSIVE=ON” is required define at [FILE_INF] and [FTP] section.
  Ver4.10+ is required define only [FTP] section.
- New JOB command.
  JobNo=0016:Build ScanPLU Index File
  JobNo=0025:Consolidation Report
  JobNo=0026:Indirect Programming

Document Ver4.01 rev1.0

New features

- Support QT-6000/6100.

Document Ver4.0 rev1.0

New features

- Support expand data format for QT-6600 which is available over 65,535 records.
- Support new machine ID for QT-6600 No.36.
- FTP port number can be specified by INI file.
  [TCP/IP] section.
  FTPPORTnn=ppp
- Support Remote IPL operation via FTP, and JOB 24/90.

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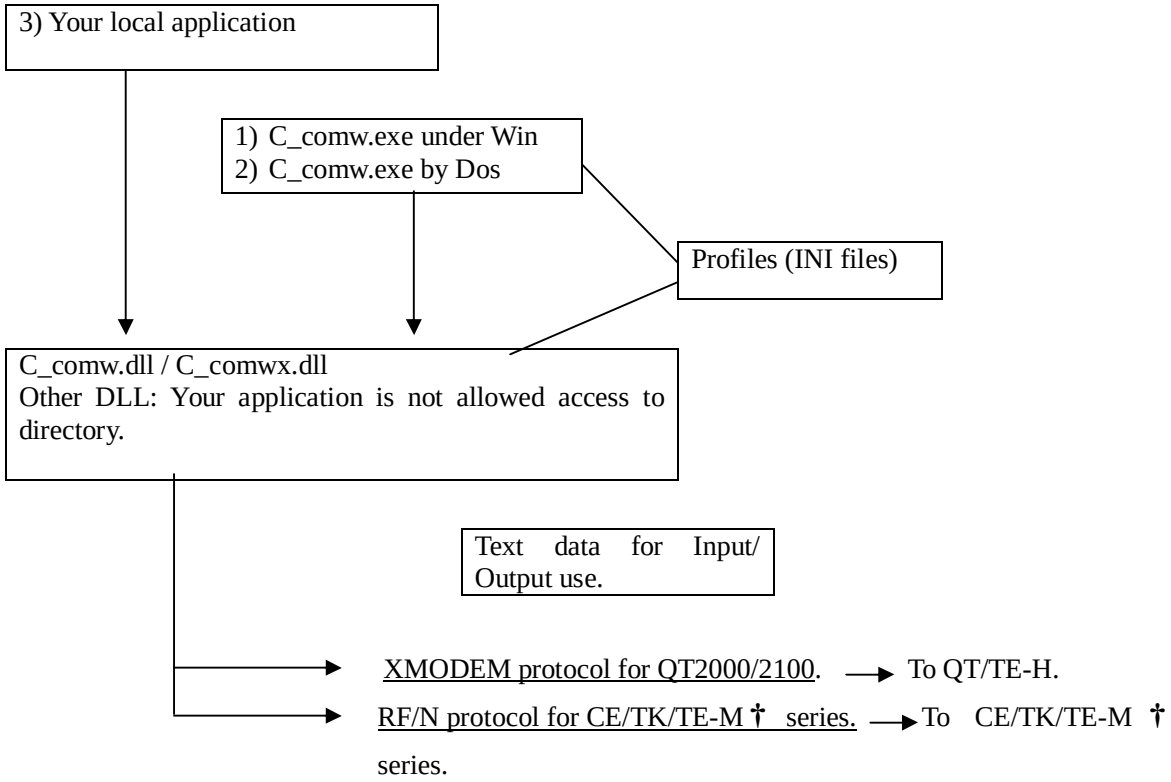
Chapter 1. Overview of the communication module/utility

1-1. Overview.

CASIO communication modules/utilities supply data transfer with CASIO ECR/POS, conversion into text format and other useful functionality to you and your original application working under the Windows **2000/XP/2003 Server ©** environment.

There are three ways to communicate with the ECR/POS by the modules/utilities.

1) To use c_comw.exe under the Windows (Communication menu)
2) To use c_comw.exe by the DOS command line
3) To use your local application designed based on c_comw.dll/c_comwx.dll


3) Your local application
1) C_comw.exe under Win
2) C_comw.exe by Dos
Profiles (INI files)
C_comw.dll / C_comwx.dll
Other DLL: Your application is not allowed access to directory.
Text data for Input/ Output use.
XMODEM protocol for QT2000/2100. → To QT/TE-H.
RF/N protocol for CE/TK/TE-M † series. → To CE/TK/TE-M † series.

Which is the best way for you?

	1) C_comw.exe under Win	2) C_comw.exe by Dos	3) Call DLL
Purpose	Easy file transfer operation. Simply backup file.	Execute full functionality of Communication utility.	For your application.
Usage	Click c_comw.exe under the Windows.	Open DOS window and enter operation parameters.	Call from your Application with operation parameters.

* QT/MID-HIGH online password is not available.

1-2. Communication protocol

1-2-1. RS232C（ONLINE）

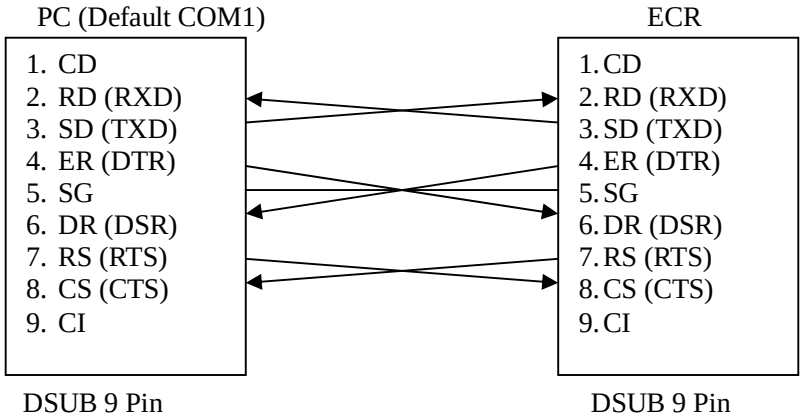
Protocol

Protocol name: QT/TE-H: CASIO original XMODEM protocol.
CE/TK/TE-M†: CASIO original RF/N protocol.

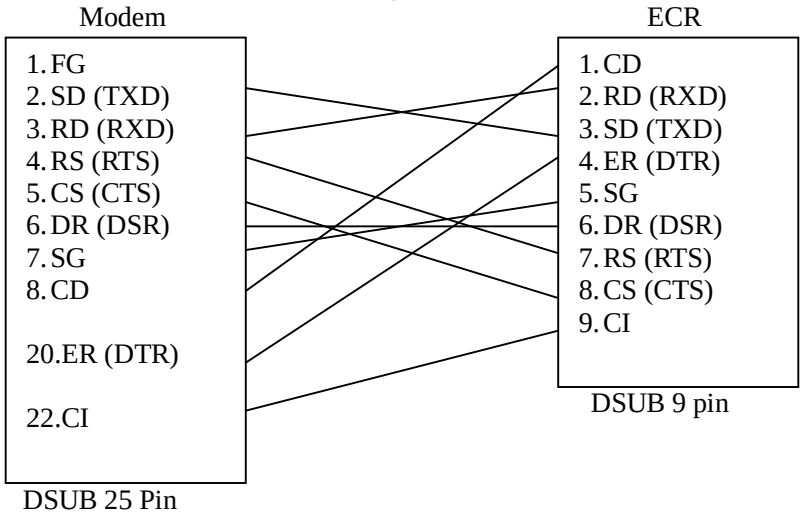
Communication:	Half duplex.
Start bit:	1 bit.
Stop bit:	1 bit.
Parity:	NONE
Control:	CS(CTS)/DR(RTS) and DR(DSR)/ER(DTR)

Cabling.

Direct PC – ECR connection. (Use cross cable)



Modem – ECR connection. (Use straight cable)



1-2-2. TCP/IP (Inline)

QT Inline protocol is based on XMODEM packet.

1-2-5. CF

CF AUTOPGM data convert to/from TEXT file. Now you can read CF AUTOPGM data to PC as TEXT file, modify preset value and write to CF card again.
CF X/Z data receive to PC. CF X/Z data is TEXT file but format is different between MID-Low and other models which are CASIO standard format. Now c_comw can convert MID-Low X/Z format to CASIO standard format for standard PC application.

1-2-6. FTP

QT support FTP protocol.

- Login/Password is depending on ECR program.
- ECR connect maximum number is 1.
- In case of communication error, time out value is depending on ECR I/O parameter program. Default is 60 sec.

FTP protocol level send/receive data can be set ”S” record. This is used for check if FTP transfer data is correct or not. If you do not know send data size, please not add “S” record.
If use c_comw, the “S” record is eliminated.(same as online received data)
Please set ECR as “use FTP server”, otherwise communication library can not connect by FTP.

1-3. Others

1-3-1. Data 90/92/900 text data

DLL can receive the data 90, 92 and 900 by test format in a PC with "-T" switch and also send their text data back to the ECR. When sending their text data to the ECR, information of the file memory allocation is also sent to the QT/TE-H with "–S0" command but not sent to the TK7000/TE-M† class ECR. So you need to allocate the same memory in each file before sending the file 90, 92 and 900 to the TK7000/TE-M† ECR.

1-3-2. Eight comports in PC

Com 1 to 8 at the PC side is supported. Specify an appropriate com port between 1 and 8 at the line "COM=" in the section [ONLINE] in the initial file.

1-3-3. Temporary file

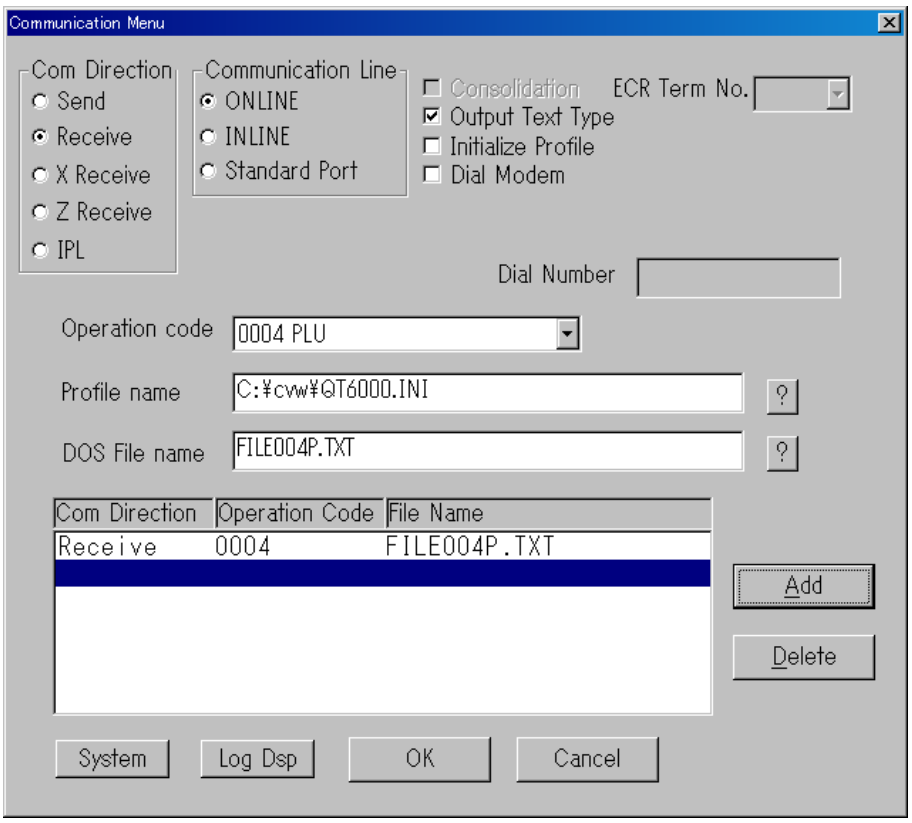
In case of illegal terminate, temporary files cannot be erased.

- In DLL current folder, there are "*.tmp" files.
- In DLL current folder, there are "$*$" files.
- In DLL drive root folder, there are temporary files.

DLL outputs error log file. Please erase the error log file if it becomes bigger.

Chapter 2. Executing c_comw.exe under the Windows

2-1. How to use



Communication Dialog

How to use:

(1) Enter/Select most a suitable profile name at [Profile name] box. This should be done as first operation.

(2) Select job type with [Com Direction] check box.
"Send" : Sending ECR program data file to the ECR
"Receive" : Receiving ECR program data file from the ECR
"X Receive" : Receiving ECR sales data without Z clear
"Z Receive" : Receive ECR sales data with Z clear
"IPL" : Sending IPL data to the ECR

(3) Select communication line type with [Communication Line] check box. If you want to use online, select "ONLINE".
When QT INI file and IN-LINE is selected, the communication becomes TCP/IP.

(4) If you want to convert a received file into TEXT file, check "Output Text Type" check box. This check box is available with "Receive", "X Receive" and "Z Receive".

(5) Select an operation code in [Operation code] select window. This operation automatically sets [DOS File name]. This check box is available with "Receive", "X Receive" and "Z Receive".

(6) In case of IPL,select IPL file name at [DOS File name] box.

(7) Press [Add] button. This operation automatically puts a command set by the above procedure in "Com Direction/Operation code/File Name" window. If you want to eliminate a command already set in the window, adjust the blue bar to the command and press [Delete] button.

(8) Press [OK] button to start communication.

*If you want to use modem, please check [Dial Modem] button and set [Dial Number].

*This is simple use then you can not all functions by this dialog.

Chapter 3. Executing c_comw.exe by DOS command

3-1. How to use (Single command)

This executes c_comw.dll and passes parameter to c_comw.dll.

(1) Load DOS window.

(2) Execute a command with c_comw.exe.

```
USG>C_comw.exe [R/S/SO/X/Z/I/C/etc] [filename] [fileno/xzcode] [switches] …
```

Example: Receive PLU file from TK7000 via online direct communication.

```
>C_comw R file0004.txt 4 – lo – dc:\cvw\tk7000.ini -T
```

(3) Check communication log file “ecr.log”.

The detail of command line parameter is mentioned on other chapter.
(Chapter 5. C_comw.exe/DLL command line/DLL parameter.)

<Easy enter parameter>
You can execute c_comw.exe without specifying “-lo” option and full path for the “-d” option.

1. You do not have to enter “–lo” option for online communication. Without “-l” option in the command line, the c_comw.exe works as “–lo”.
2. You do not have to enter full path with “–d” option. Entering INI file name without path name, c_comw.exe searches it in the current directory.
   Of course, you can enter full path with “–d” option, if you want.

Example:

```
>c_comw R file0004.txt 4 -dQT6600.ini -T
```

Instead of

```
>c_comw R file0004.txt 4 -lo – dc:\cvw\QT6600.ini -T
```

<Support space-include folder>
Now filename can has space-include folder name.
Example:

```
>c_comw R “c:\Program Files\casio\f.txt” 4 -lo -d“c:\Program Files\casio\qt6600.ini”
```

3-2. How to use (Multi command)

This executes c_comwx.dll and passes parameter to c_comwx.dll with script file.

(1) Load DOS window.

(2) Execute command with c_comw.exe.
USG>c_comw.exe [script file name] [switches] ……
Example: Receive PLU file from TK7000 via ONLINE.
Script file: mycmd.txt -> Inside of mycmd.txt: S,0000,FILE004P.TXT
>c_comw mycmd.txt -lo -dc:¥cvw¥tk7000.ini -T

(3) Check communication log file “ecr.log”.

- Don’t suppress line parameter, such as –lo, with multi command.
- Don’t suppress INI file path name with –d option, full path name is required.
- [Script file name] and INI file path with –d option can have space-include path name.
Example: >c_comw “c:¥Program Files¥casio¥cmd.txt” -lo -d“c:¥Program Files¥casio¥qt6600.ini”

How to C_comw.exe judge execute single command or multi command is as follows.
- If first parameter is 2 characters or less, execute c_comw.dll.
- If first parameter is more than 3 characters, execute c_comwx.dll.

Please use script file name more than 3 characters.
About switches, please refer another chapter.

Chapter 4. Usage of the communication DLL by softoware

4-1. How to use C_COMW.DLL under C/C++ language environment

The c_comw.dll executes a single communication command in one connection line such like c_comw.exe.

<Usage>

```
DLL File Name:      " C_COMW.DLL "
Function Name:      InitC_COMW
Parameter:          LPSTR prt, int mess
                    Prt      string defined like "C_Comw.dll". Refer to <Parameter list> section
                    Mess    To display result dialog of the communication result.
                             0 is not displayed result, 1 is displayed result.
Return value:       int      result              // This return value is int.(32bit)
                    result -  0: Normal end.
                             Others: Error end error code.
```

<Example of coding>

```
typedef int (*PROCCER1)(LPSTR,int);             // This return value is int.(32bit)
PROCCER1 lpfnInitC_Comw;

HINSTANCE hinstSamp = ::LoadLibrary("C_COMW.DLL");
if (hinstSamp == NULL)
        MessageBox("LoadLibrary failed");
else
{
        lpfnInitC_Comw = (PROCCER1)::GetProcAddress(hinstSamp,"InitC_COMW");
        if (lpfnInitC_Comw == NULL)
                MessageBox("GetProcAddress failed");
        else
       {
                int Ret = 0;                    // This return value is int.(32bit)
                Ret = lpfnInitC_Comw("R FILE001P.TXT 1 -lo -dc:\\c_util.ini -i -T",1);
                CString str; str.Format("Error : %d", Ret);
                MessageBox(str);
        }
        ::FreeLibrary(hinstSamp);
}
```

The detail of command string/parameter, please see other chapter.
(Chapter 5. C_comw.exe/dll command line/Dll parameter.)

4-2. How to use C_COMWX.DLL under C/C++ language environment

Using C_COMWX.DLL, a PC will make multiple steps operation in one connection line. Especially it will be recommended to be used with the modem communication. Multiple files can be taken from the ECR by one time dial-up for example.

<Usage>

```
DLL File Name:   " C_COMWX.DLL "
Function Name:    InitC_COMWX
Parameter:        LPSTR prt, int mess
                    prt - string defined like "C_Comw.dll". Refer to <Parameter list> section
                    mess - to display result of the communication, 0 is not displayed, 1 is displayed.
Return value:     int  result                  // This return value is int.(32bit)
                    result -  0: Normal end.
                              Others: Error end error code.
```

<Example>

```
typedef int (*PROCCER1)(LPSTR,int);            // This return value is int.(32bit)
PROCCER1 lpfnInitC_Comwx;

HINSTANCE hinstSamp = ::LoadLibrary("C_COMWX.DLL");
if (hinstSamp == NULL)
    MessageBox("LoadLibrary failed");
else
{
        lpfnInitC_Comwx = (PROCCER1)::GetProcAddress(hinstSamp,"InitC_COMWX");
        if (lpfnInitC_Comwx == NULL)
                MessageBox("GetProcAddress failed");
        else
        {
                FILE * fp = fopen("c:\\Filelist.txt","w");
                if(fp == NULL)
                    MessageBox("File list creation failed");
                else
               {
                        fputs("J,0002", fp); // 1st file to job cmd fputs("\n",fp);
                        fputs("Z,0001,File001z.txt", fp); // 2nd file to receive fputs("\n",fp);
                        fputs("Z,0002,File002z.txt", fp); // 3rd file to receive fputs ("\n",fp);
                        fputs("S,0000,File005p.txt", fp); // 4th file to send fputs   ("\n",fp);
                        fputs("J,0003", fp);         // 5th file to job cmd fputs("\n",fp);
                        fclose(fp);
                        int Ret = FALSE;            // This return value is int.(32bit)
                        Ret = lpfnInitC_Comwx("c:\\Filelist.txt -lo -dc:\\Tk7000.ini -i -T",0);
                        CString str;
                        str.Format("Error : %d", Ret);
                        MessageBox(str);
                        // The filelist file is deleted.
                        remove("c:\\Filelist");
                }
       }
        ::FreeLibrary(hinstSamp);
}
```

Chapter 5. C_comw.exe/DLL command line/DLL parameter

5-1. Outline

Before use communication DLL, please set correct values for INI file for detail see INI file explanation.

- If use RS232C, set COM= and SPEED=.
- If use TCP/IP, set ECRnn= IP address.

NOTE 5-1: Before starting PC communication, please set correct value for Connection table. (for CE/TK/TE-M† is FILE091, QT/TE-H is FILE901) Otherwise some command does not work, for example Z receive, Job command.

5-2. File receive/send operation (Single command).

This is used for c_comw.exe or c_comw.dll parameter.

USG: "[R/S/S0/X/Z/C] [PC FileName] [ECR File Number] [switches…….]"

[R/S/S0/X/Z/C]

```
R: Receive PGM data from ECR
S: Send PGM data to ECR
(S0 is allocating records in files with auto program 90 for QT/TE-H)
X: Receive sales data from ECR
Z: Receive sales data from ECR and make RESET operation for ECR
  QT/TE-H series ECR will automatically Z clears if Z receives.
  CE/TK/TE-MID series PC receive as X and send JOB Z command after received.
C: Create File or expand the number of record for existed file. (CE/TK/TE-M† only)
```

[PC FileName]

```
In case of R/X/Z/C, PC filename is used for save received data.
In case of S/S0, PC filename is used for send data.
See Note 5-2, regarding with the case of C.
See Note 5-5, regarding with QT IPL file.
```

[ECR File Number]

Incase of R/X/Z, File number of ECR to be received.
Incase of S, this value is invalid.
Incase of CF card file, this value is CF card file name with INI file [CF] section path name.

[switches…..]

```
-l  Specify the communication line.
        -lo: Use Online communication.
        -li: Use Ethernet communication
        -lc: Use CF card file. See NOTE5-3.
        -lf: Use FTP. See NOTE5-4.
-d  Specify the profile name with path. For example,
        -dc:\Cvw\Tk7000.ini
        -d"c:\Cvw for win\Tk7000.ini"  For space directory, please use " ".
-i  Specify to initialize the profile (Ini file) file format section.
        This switch update [FILExxxx] section. (Ex. [FILE0004])
        In case of use CF card file, this switch is available when receive binary file.
```

-T Specify to store the received file as Text. This is available only for R/X/Z.
This switch is not available for data file (Ex.90), journal memory file for QT/TE-H.
In case of send, DLL automatically judge text or binary file.
CF card X/Z file receive is always TEXT even if no -T switch.

-w Specify to display the data to text conversion window.

-u Specify to confirm profile update. This switch is available with use – i switch.

-m Specify to have modem dial connection, available only for -lo, ie; Online.
For example, " -m042-5135-2265 ".
When you use modem communication, please refer Chapter 6.Modem communication.

-o Specify the response file name, if available job command.
The response file name must not have extended name like " res.dat ".
For example, " -ores.dat " does not work, but " -ores " works.
CE/TK/TE-M† is available with J 401 command.
QT/TE-H is available with J 2,4,6 and 23 command.

-t Specify the terminal designation. (Ver.3.10)
Ethernet :1~[TCP/IP] Detailed IP address calculation by section settings
Detailed address designation setting is possible. :-t132.1.2.171

-n FTP login name.
Please set same login name at ECR program. See NOTE5-4.

-p FTP password.
Please set same password at ECR program. See NOTE5-4.

The order of parameters is not defined. But parameter without "-" has order as follows.
[R/S/S0/X/Z] [PC FileName] [ECR File Number]

Note 5-2: Explanation of file structure for C command; Create File and expand record.

"Control code"	…… the first line
File No, No of Record, File Name	…… the second line
File No, No of Record, File Name	…… the third line
|	
File No, No of Record, File Name	…… the last line

Control Code:
A: Initialization (Control Code must be "INIT")
Purpose: Use it for installation
Action: Delete all of files in ECR and recreate files defined as the following lines.

B: Normal operation for creating files and expanding record of files (Control Code is not "INIT")
Purpose: Maintenance of ECR. Adding the new files, maintenance the number of records, etc.
Action: If there exist a file, resize number of record of that file.
If not, create a file for new file defines as file No and No of Record parmes.

Example:

Prepare text file named as “creinfo.txt”.

Inside data of “creinfo.txt” is following.

```
UPDATE
0004,100,FILE0004
0005,50,FILE0005
0006,20,FILE0006
```

Send this information to ECR

```
>c_comw C creinfo.txt – lo – dc:\cvw\tk7000.ini
```

With this operation, ECR recreate FILE0004,0005 and 0006 as defined record number.

After this operation you can send your preset data (If prepared FILE0004.txt, FILE0005.txt and FILE0006.txt files with your data) with S command to ECR like this.

```
>c_comw S FILE0004.txt 4 – lo – dc:\cvw\tk7000.ini
>c_comw S FILE0005.txt 5 – lo – dc:\cvw\tk7000.ini
>c_comw S FILE0006.txt 6 – lo – dc:\cvw\tk7000.ini
```

…..This ‘C’ command is named “FILE1000” at inside of TK/CE ECR.

Note 5-3: Support CF card file.
CF card file convert target is CF AUTOPGM file and CF X/Z file.
CF card means AUTOPGM file convert to/from TEXT and X/Z file convert to general CASIO X/Z format.
Before use CF card file convert, you need to set CF card drive and path name at INI file [CF] section. Target file name is generated by command line file name (at file number parameter area) and INI file drive and path name.
Also need to set [CF] section DATE order by “DATE=” key, like MMDDYY or DDMMYY.

Example 1) AUTOPGM
INI file [CF] section:FOLDER_X=G:¥CASIO¥QT6600¥AUTOPGM
CF card file:G:¥CASIO¥QT6600¥AUTOPGM¥FILE001P.901
This case command line should be below. – convert FILE001P.901 to F.TXT.
>c_comw R F.TXT FILE001P.901 -lc -dQT6600.INI -T

Example 2) X/Z
INI file [CF] section: FOLDER_X=G:¥CASIO¥QT6600¥XZ
CF card file: G:¥CASIO¥QT6600¥XZ¥060508¥X001T01.TXT
This case command line should be below. – convert 060508¥X001T01.TXT to X.TXT.
>c_comw X X.TXT 060508¥X001T01.TXT -lc -dQT6600.INI

Note 5-4: FTP.
FTP required ECR terminal ID (IP address), login/password.
Same login/password must be set ECR program.
>c_comw R F.TXT 4 -lf -dQT6600.INI -t1 -nLOGIN -pPASS -T

In case receive Fixed Tantalizer X/Z data from FTP -lf, GT does not come.
Please receive GT data with X/Z code 30.
In case receive PLU X/Z data from FTP -lf, Shift PLU does not come with PLU data.
Please receive Shift PLU data with X/Z code 65. PLU Z receive clear Shift PLU also, then if you want to Z receive both PLU and Shift PLU, first X receive Shift PLU and second Z receive PLU.

Note 5-5: Send IPL file.
ECR will receive IPL file via FTP which suffix is "*.IPL", ignore file number parameter.
ECR receive IPL file from PC (Communication Library) and works depend on ECR models as below.
(PC only can send IPL file to ECR but can not receive IPL file from ECR.)

[QT-6600]
PC send IPL file to ECR and ECR write to CF card root folder, which file name is same as PC send.
PC must send file name "QT6600.IPL" to execute JOB 90 (Execute IPL).

[SE-C6000/SE-S6000]
SE-C6000 series has no CF/RAC device then IPL file (which PC sends) write to RAM area.
Once finished all IPL data write to RAM area, ECR execute IPL from RAM area.
Send file name must be "SE6000.IPL".
1. Reserve RAM area for IPL
Before send IPL file, ECR need to be prepared RAM area for receive file same size of IPL file on PC.
This command should be sent from PC as JOB 91.
2. Send IPL file
Send IPL file "SE6000.IPL" from PC to ECR.
3. Execute IPL
PC sends JOB 90 to start IPL on ECR.

Note 5-6:"-i" Parameter in QT-6X00

About TCP/IP and FTP communication.

<Operation>

Example 1) PLU file receiving from QT TCP/IP communication terminal 2.

```
>c_comw R FILE004.TXT  4 -t2 -li  -dQT6600.INI -T
```

Example 2) PLU file receiving from QT TCP/IP communication address 132.1.2.170.

```
>c_comw R FILE004.TXT  4 -t132.1.2.170 -li  -dQT6600.INI -T
```

<INI File>

Add ini file section by TCP/IP communication.

・When QT ini file is selected, the software recognizes that TCP/IP communication is used.
Regulate the In-line communication type for [INLINE] section.
LINE=TCP/IP ← If this designation exists, the communication becomes TCP/IP.
PORT=<N> ← Offset value of PORT No. (Same setting with QT terminal.)

・ [TCP/IP] Section
Terminal IP address designation
Form:(Terminal No) = (IP address)

```
[TCP/IP]
ECR01=192.168.0.1
ECR02=192.168.0.50
ECR03=192.168.0.51
ECR04=192.168.0.52
DELAY=10   <-- Transmission delay time in mS for each packet. Default is 10mS
```

Depend on the performance of your PC but slower PC could increase this value to gives sufficient processing time to PC, faster PC could set shorter time to increase efficiency of communication.

FTP communication can be defined FTP connect port number.
Form:(Terminal No)=(FTP Connect Port No)

```
[TCP/IP]
FTPPORT01=21
FTPPORT02=500
```

Without this definition, FTP use default port number 21.

<How to know IP address of each ECR from PC>

Refer individual ECR designation of INI File [TCP/IP] session.

＜Collection / Consolidation / Auto PGM for TCP/IP communication＞

QT TCP/IP enables to communicate each terminal directory from PC.
In case collection, consolidation or auto PGM is necessary by several terminals which are connected by In-line, please access each terminal directly from PC by designating IP address (Terminal ID)

not use the In-line job command and send/receive the necessary PGM/sales data by the communication between PC and each QT terminal.

Only following Job commands are supported to use by DLL TCP/IP communication for QT.
Job No.=0001 : Send date / clock time information
Job No.=0002 : Z lock
Job No.=0003 : Z unlock
Job No.=0004 : Z lock status check
Job No.=0006 : Z reset
Job No.=0013 : Main display remote ON
Job No.=0014 : Main display remote OFF

5-3. File receive/send operation (Multi command).

This is used for c_comw.exe with script file name or c_comwx.dll parameter.

USG: "[Script filename] [switches…]"

[Script filename]

Specify script text file name.
Script text File describes how to execute Receive and Send of AUTOPGM, Receive Sales data, JOB command and control command.

AUTOPGM, XZ: [R/S/S0/X/Z],[ECR File No],[PC FileName]

[R/S/S0/X/Z]:

R: Receive AUTOPGM data from ECR
S: Send AUTOPGM data to ECR. (S0 is allocating records in files with auto program 90 for QT/TE-H)
X: Receive sales data from ECR
Z: Receive sales data and execute reset on ECR

[ECR File No]:

To select a File on ECR, they are defined under ECR.

[PC FileName]:

File name in PC folder will be used for destination file of receiving AUTOPGM or X/Z and source file of sending AUTOPGM.
If PC folder has space character, use “”.

JOB command: J Job No, [param1] [param2] …….[param N]

Job command send to ECR
Detail of JOB command, refer other chapter.

Control command: Specify sequence control command.

Wait command

The C_COMWX can execute multiple commands defined in a script file during one communication line is connected without cutting the line. Each command line was executed one by one at a time interval.
The new DLLs can stop moving on next command by new "wait" command that is put in the script file. It is possible to specify how long the DLL processing is stopped.
A format of the wait command line is;

$WAIT,xxxxxxx

Note:

1) $WAIT and $wait are both OK.
2) "xxxxxxx" is the wait time (sec) and leading zero's are not be required. Example "$WAIT,60" stops next command line execution for 60 sec.
3) The "$WAIT" should be inserted between command lines in the text file called by c_comwx.dll.
4) The command line of the "$WAIT" does not need any option like "-T" and definition of the initial file such as "-dc:tk7000.ini". You should mention only "$WAIT,xxxxxxx" at the line.

“If” command and jump to a label

The following commands are newly available for the new DLLs so that the DLL can move on different command lines according to a result of the communication.

- "if" command
- Label function
- "End" command

TK7000/TE-M† series: response file (Verify the value that is stored for a specified ECR no. in a specified file)

```
$if –r"¥cvw¥res.dat"[1]=0,NEXT
$if –r"res.dat"[1]=43,NEXT
```

QT/TE-H series: response file (Verify the value that is stored at first byte in a specified file)

```
$if –r"c:¥Programs Files¥cvw¥res.dat"=0,NEXT
$if –r"res.dat"=0,NEXT
```

Error log file (Verify the value that is stored in the last error log data)

```
$if –l"..¥cvw¥ecr.log"=0,NEXT
$if –l"ecr.log"=0,NEXT
```

a) If verified value is equal to a specified value at the right hand, then jump to a specified label. If verified value is not equal, move to next command line.
b) The both "=" and "!=" can be used for equal character.
c) Specify a response file name in "" by using –r
d) Specify an error log file name in "" by using –l
e) It is possible to specify a location (directly) for the response file and the error log file
f) File format of the response file is different between the TK7000/TE-M† series and QT/TE-H, however the DLL can detect the model by a definition line for ECR model in initial file.
   - TK7000/TE-M† series: ECR no. is specified by adding [n] definition in the command line. Without the definition, syntax error will happen.
   - QT/TE-H: The value stored in the first byte is always used for the verification.
g) If a specified file is nothing, the verification is always judged as equal. Then jump to a specified label.
h) If an output label is nothing, the dll communication becomes error end.

An example for TK7000/TE-M† series

```
J,2
R,4,File004.txt
$if,-l"g:¥last¥ecr.log"=0,NEXT
R,2,File002.txt
$WAIT,10
R,5,File005.txt
J,3
$END
$,NEXT
X,15,File015x.txt
J,3
```

Example of how to make Filelist.

Expected function as follows.
1st line: Send Z lock Job command
2nd line: Receive the Fixed transaction data and Z operation
3rd line: Receive the Free Function file data and Z operation
4th line: Send PLU program data to ECR
5th line: Send Z unlock Job command

Contents of Filelist:

```
J,0002
Z,0001,File001z.txt
Z,0002,File002z.txt
S,0000,File004p.txt
J,0003
```

Example of space folder.

```
Z,0001,”c:¥Program Files¥CASIO¥ECR¥File001z.txt”
Z,0002,”c:¥Program Files¥CASIO¥ECR¥File002z.txt”
S,0000,”c:¥Program Files¥CASIO¥ECR¥File004p.txt”
```

5-4. Job command operation

USG: ”J JobNo [param1] [param2] ……[ParamN] switches”

JobNo=0001: Send clock time information.
[QT/TE-H] Param1: yymmdd information.
Param2: hhmmss information.
Param3: Send target terminal number.
Example. Set ECR time as 2001/February/03rd 23:59:00.
J 1 010203 235900 1 –dc:¥cvw¥qt2000.ini

JobNo=0002: Z lock command
[CE/TK/TE-M†] No parameters expected
[QT/TE-H/SEC6000/SES6000] Param1: Z lock terminal number.
Param2: Response result save file name with –o switch.
Example. Z Lock terminal 1.
J 2 1 –ores –dc:¥cvw¥qt2000.ini

JobNo=0003: Z unlock command
[CE/TK/TE-M†] No parameters expected
[QT/TE-H/SEC6000/SES6000] Param1: Z unlock terminal number.
Example. Z Unlock terminal 2.
J 3 2 –dc:¥cvw¥qt2000.ini

JobNo=0004: Z lock status check
[QT/TE-H]Param1: Status check terminal number.
Param2: Response result save file name with –o switch.
Example. Z Lock status check of terminal 1 and save to “res” file if Z Lock was successfully completed or not.
J 4 1 –ores –dc:¥cvw¥qt2000.ini

JobNo=0005: Z Reset command
[CE/TK/TE-M†] Param1: X/Z select code

JobNo=0006: Z Reset command.
[QT/TE-H/SEC6000/SES6000] Param1: Z Reset Terminal number
Param2: X/Z select code
Param3: Start record (If put 0, from start record)
Param4: End record (If put 0, until end record)
Param5: Response result save file name with –o switch.
Example. Z Reset terminal 1 PLU file for all record.
J 6 1 14 0 0 –ores –dc:¥cvw¥qt2000.ini

JobNo=0013: LCD Remote ON.
[QT/TE-H]Param1: LCD ON Terminal number
Example. LCD turn on for terminal 1.
J 13 1 –dc:¥cvw¥qt2000.ini

JobNo=0014: LCD Remote OFF.
[QT/TE-H]Param1: LCD OFF Terminal number
Example. LCD turn off terminal 1.

J 14 1 –dc:¥cvw¥qt2000.ini

JobNo=0020: Collection job among ECR start
[QT/TE-H]Param1: Target terminal number.(see NOTE 5-4)
Param2: 0='X', 1='Z'
Param3: X/Z select code
Param4: Consolidation status.(see below)
Example. X Collect PLU file for all terminal.
J 20 0 0 14 81 –dc:¥cvw¥qt2000.ini
QT/TE-H collection/consolidation status value.
x80: Collection/consolidation does not include PC connected terminal.
x81: Collection/consolidation include PC connected terminal.
1xx: Ignore printer error.
2xx: Does not report print.

JobNo=0021: Consolidation job among ECR start
[CE/TK/TE-M†] Param1: Select terminal (see NOTE 5-3)
Param2: 0='X', 1='Z'
Param3: X/Z select code
Param4: 0=not issuing report 1=issuing report
Example. X Consolidation PLU file for all terminal.
J 21 A 0 14 1 –lo –dc:¥cvw¥tk7000.ini
[QT/TE-H] Param1: Target terminal number.(see NOTE 5-4)
Param2: 0='X', 1='Z'
Param3: X/Z select code
Param4: Consolidate n status.(see J 20)
Example. Z Consolidate Batch2 file for all terminal without print report.
J 21 0 1 1 281 –dc:¥cvw¥qt2000.ini

JobNo=0022: Collection/Consolidation job among ECR start
[QT/TE-H]Param1: Target terminal number.(see NOTE 5-4)
Param2: 0='X', 1='Z'
Param3: X/Z select code
Param4: Consolidation status.(see J 20)
Example. X Collect/Consolidate Fixed Totalizer file of terminal 1 and ignore printer error.
J 22 1 0 11 181 –dc:¥cvw¥qt2000.ini

JobNo=0023: Last Collection/Consolidation result status check.
[QT/TE-H]Param1: Target terminal number.(see NOTE 5-4)
Param2: Response result save file name with –o switch.
Example. Collection/Consolidation status check of terminal 1 and save to "res" file.
J 23 1 -ores –dc:¥cvw¥qt2000.ini
"res" has 1 byte binary response data.
0: Normal end.
1: Busy working now.
Else: Error code.
Type of error.
1. Online communication error between PC and ECR.
This is fatal error and this error will be logged in "ecr.log" file. But there is a possibility that this error happens under correct hardware condition.

ECR's CPU is for example too busy to communicate with a PC because of another task.

2. Inside ECR. (Online communication is working)
   For example Z lock request command is sent to the ECR while registration. With CE/TK/TE-M† series, this error can not be logged in "ecr.log" file because of single task machine. With QT/TE-H this error can **not** be also logged in "ecr.log" file but can receive by response file with –o parameter, because of multi task machine.
   This is fatal error of ECR.
3. ECR's CPU is too busy.
   For example J 23 command is sent to the ECR while the ECR is consolidating sales data (CPU is busy for the consolidation). This error can be logged in "ecr.log" file, but this is not actual error. This just indicates that the ECR can not reply to the J 23 at this moment. Please try the J 23 once again, if possible.
4. Inline error between ECR and ECR.
   With CE/TK/TE-M† series, this error can be received by J 401 command.
   With QT/TE-H, this error can be received by response file with –o parameter. This is fatal error for inline communication.
5. Inside another ECR which is not connected via online but inline.
   With CE/TK/TE-M† series, this error can be received by J 401 command.
   With QT/TE-H, this error can be received by response file with –o parameter. This is fatal error.

JobNo=0024: Last remote IPL status check.
[QT6600]Param1: Target terminal number.(see NOTE 5-6)
Param2: Response result save file name with –o switch.
Example. **J 24 1 -ores -lf -dQT6600.INI -t1 -nL -pP**

JobNo=0016: Build ScanPLU Index File
[QT6600] Param1: Build ScanPLU index file
Example Build ScanPLU index file at terminal number 1
J 16 1 -dC:¥CVW¥QT6000.ini

JobNo=0025: Consolidation Report
[QT6600] Param1: Cumulate the Scan PLU daily X-reports of the slave terminals to the master terminal and set the slave terminal X-reports to zero.
Example Cumulate the Scan PLU daily x-reports of slave terminals to terminal number 1
J 25 1 -dC:¥CVW¥QT6000.ini

JobNo=0026 Indirect Programming
[QT6600/SEC6000/SES6000]Param1: Assume data from Scan PLU file (#70) to Scan PLU file (#16)
Example Assume data from ScanPLU file (#70) at terminal number 1
J 26 1 -dC:¥CVW¥QT6000.ini

JobNo=0050: Job start send auto program.
[QT/TE-H]Param1: Target terminal number.(see NOTE 5-4)
Param2: Target file number.
Param3: Always 0
Param4: Start record number. (If put 0, from start record)
Param5: End record number. (If put 0, until end record)
Example. J 50 2 0 0 0 –dc:¥cvw¥qt2000.ini

JobNo=0051: Job start receive auto program.
[QT/TE-H]Param1: Target terminal number.(see NOTE 5-4)
Param2: Target file number.
Param3: Always 0
Param4: Always 0
Param5: Always 0
Example. J 51 3 0 0 0 –dc:¥cvw¥qt2000.ini

JobNo=0090: Job start IPL
[QT6600/SEC6000/SES6000]Param1: Target terminal number.(see NOTE 5-6)
Example. **J 90 1 -lf -dQT6600.INI -t1 -nL -pP**

JobNo=0091: Reserve IPL area on RAM.
[SEC6000/SES6000] Param1: Target terminal number.(see NOTE 5-6)
Param2: IPL file bytes
Param3: Type of job
0: Reserve specified bytes.
1: for future expand.
Example. **J 91 1 1862278 0 -lf – dSEC6000.INI -t1 -nL -pP**
File size of the IPL module may be changed in the future version.

JobNo=0215: Not Fund PLU(NFP) file clear
[CE/TK/TE-M†] No parameters expected

JobNo=0216: NFP maintenance file clear
[CE/TK/TE-M†] No parameters expected

JobNo=0217: NFP or Batch maintenance file update
[CE/TK/TE-M†] Param1: file number '70' for Batch maintenance file and '72' for NFP
Example. J 217 70 –dc:¥cvw¥tk7000.ini

JobNo=0300: Auto program start command
[CE/TK/TE-M†] Param1: Auto Program select code
Param2: Select terminal (see NOTE 5-3)

JobNo=0302: NFP clear start command
[CE/TK/TE-M†] No parameters expected

JobNo=0303: NFP maintenance file clear start command
[CE/TK/TE-M†] No parameters expected

JobNo=0304: NFP or Batch maintenance file update start command
[CE/TK/TE-M†] Param1: file number '70' for Batch maintenance file and '72' for NFP

JobNo=0305: Z lock start command
[CE/TK/TE-M†] Param1: Select terminal (see NOTE 5-3)

JobNo=0306: Z unlock start command
[CE/TK/TE-M†] Param1: Select terminal (see NOTE 5-3)

JobNo=0307: Z clear start command
[CE/TK/TE-M†] Param1: X/Z select code
Param2: 0
Param3: Select terminal (see NOTE 5-3)
Example. J 307 11 0 A –lo –dc:¥cvw¥tk7000.ini

JobNo=0308: NFP collection start command
[CE/TK/TE-M†] Param1: 0=issuing report 1= not issuing report

JobNo=0400: Password for Online.
[CE/TK/TE-M†] Param1: Password within 8 letters

You do not have to use this job command normally, because the communication module automatically executes Password command before starting another type of communication and then it proceeds with the process after the password command is performed.
If using programming tool "CVW" expect this Password, [PASSWORD] definition has to be programmed with 8 letters profile (ini file).
The definition line in the profile (ini file) is shown below.
[PASSWORD]
password=CASIOXYZ
Caution: On CE/TK/TE-M† series, the password must be 8 character.

JobNo=0401: Status read for all of slave terminals
[CE/TK/TE-M†] switches: -o[Response file name]
Example. J 401 –ores -lo –dc:¥cvw¥tk7000.ini

A file defined as [Response file name] will be destination written the status of communication.
Response file format:

Header	11bytes	Example. 6E 3A 4A 30 34 30 31 3A 00 00 3A
My ID	1byte	Example. 01
Date: yy/mm/dd	3bytes	Example. 01 01 09 (2001.Jan.09th)
Time: hh/mm	2bytes	Example. 11 56 (11:56)
Exe Number	Intel short 2bytes	Example. 30 01 (Job 304. Because 0130 hex)
Result of Term 1	Intel short 2bytes	Example. 00 00 (Result is 0. Normal end)
Result of Term 2 till	Intel short 2bytes	Example. F4 87 (Result 87F4 is 2036 error)
Result of Term 31	Intel short 2bytes	

Result of Term 32 Intel short 2bytes

- You do not have to care Header area.
- Date/Time is the date/time when job has been executed.
- Exe Number is internal execution Job number. **NOTE 5-5**
- Intel short is converted hi-low byte like AA BB means BBAA hex
  For example, 12 34 is 3412 hex.
- Result of Terminal has code like follows.
  0 is normal end
  1 is before or waiting execution.
  2 is not target terminal of the last job command.
  8xxx is error end. (Error code body is specified at xxx).
  For example 87F4 is error 7F4 hex /2036 decimal.
- Terminal 32 result is available (V2.45).

NOTE 5-3:Refer to the following selecting method

Specified terminal : T[n] …… n will be 1 to 32
Select group : G[n]……. n will be 1 to 9
All terminals : A

When use this switch, please set connection table at ECR side, even if stand alone.

NOTE 5-4: QT/TE-H Terminal number.

0: All terminal for Collection/Consolidation (JOB 21,22,23)
1-32: Specified terminal number.

NOTE 5-5: Exe Number is available for these Job command..

Job 21 Exe Number is 21.
Job 300 Exe Number is 300.
Job 302 Exe Number is 5.
Job 303 Exe Number is 5.
Job 304 Exe Number is 304.
Job 305 Exe Number is 305.
Job 306 Exe Number is 306.
Job 307 Exe Number is 5.
Job 308 Exe Number is 308.
Other Jobs are not set in response file.
Also operated by ECR is set in response file.

NOTE 5-6: Remote IPL target terminal number.

Target terminal number need to be same as -t option.

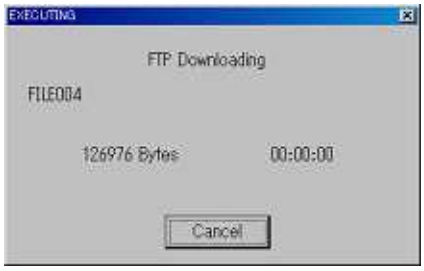
Available line is FTP -lf only.

5-5. Communication Dialog

Communication Dialog is shown when communicating.
The communication title – Up load/Down load and type – can be changed by INI file.

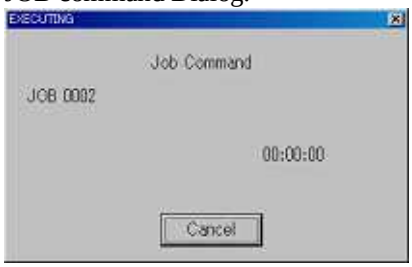
5-5-1. Dialog example

File receive – R/X/Z command – Dialog.



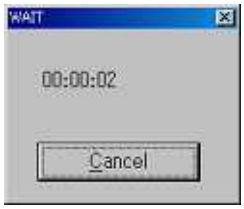
File send – S command – Dialog.

JOB command Dialog.



File create command – C command – Dialog.

Multi command $WAIT Dialog.



5-5-2. INI file setting.

[COMDIALOG] Sectoin.

SHOWDIALOG=ON
Select show dialog (ON) or not (OFF). No definition means ON.

CANCELCAPTION=Cancel
Cancel button caption. No definition shows "Cancel".

MESSJ=Command execute
JOB command title. No definition shows "Job Command".

loMESSU=Online Uploading
Online uploading title. No definition shows "Online Uploading". STDPORT is same.
loMESSD=Online Downloading
Online downloading title. No definition shows "Online Downloading". STDPORT is same.
loMESSC=Online Creating
Online creating title. No definition shows "Online Creating". STDPORT is same.

liMESSU=INLINE File send
INLINE send title. No definition shows “Inline Uploading”.
liMESSD=INLINE File receive
INLINE receive title. No definition shows “Inline Downloading"..

lfMESSU=FTP File send
FTP send title. No definition shows “FTP Uploading”.
lfMESSD=FTP File receive
FTP send title. No definition shows “FTP Downloading”.

llMESSU= Japanese only.
llMESSD= Japanese only.

lcMESSU=CF Uploading
CF receiving. No definition shows "CF Uploading".
lcMESSD=CF Downloading
CF sending. No definition shows "CF Downloading".

* CANCELCAPTION is used when $WAIT Dialog.

Chapter 6. Modem communication

Communication utility has a function to dial.
This function works with Windows TAPI set on “control panel” – “ modem”, this means that you have to choose a modem working under the Windows and to set appropriate conditions to the modem by the “modem function”.

6-1. How to use modem communication

1. Prepare appropriate modems for the both PC side and ECR side. CASIO guarantees US Robotics 56K FAXMODEM 5676 for Windows.
2. Install modem software in a PC. Normally it is installed with “control panel” – “modem”. It is also important to refer to the modem manual.
3. Use a straight cable between a PC and the modem.
4. Preset ECR programming for connecting with the modem. (see NOTE 6-1)
5. Set appropriate programmable conditions to the modem at ECR side. (see NOTE 6-2)
   IfTK7000/TE-M † series, you can set the modem with the ECR command via com port.
6. Set PC side parameters, like COM port, etc.
7. Run your software with modem parameter (-m option), you can see c_comw.dll calls Windows TAPI, dial and communicate via modem. (For multiple commands in one connection line, see NOTE 6-3)

NOTE 6-1: How to preset ECR. (See also ECR manual)
If you use CE/TK/TE-M † series, set “3000” at the FILE0098 / Record number 1 for 19200bps. The procedure for setting the parameter is; PGM3 198 [#2] 3000 [#1] [#2].
If you use QT/TE-H, please set “Activation signal” to “CI” in the I/O parameter.

NOTE 6-2: How to set the modem.
If you use CE/TK/TE-M † series, you can set the modem from ECR. First connect the modem to the ECR via com 1 port, then operate, PGM7 4301 [#2] [#1]. If your modem command is not same as CASIO standard, modify FILE0096 as your suitable preset.
If you use QT/TE-H, connect the modem to a PC, then set the modem by a PC. An important point is to set as auto answer mode. About detail, refer to the modem manual.

NOTE 6-3: How to use multiple commands via modem.
C_comw.exe/dll open/close a connection line per one command. This means dial/close modem one by one command. If you want to send multiple commands in one connection line, , please do like this.
ForTK7000/TE-M † series:
Use c_comwx.dll. (Please refer to c_comwx explanation)
For QT/TE-H:
As the C_comwx.dll does not support QT/TE-H, make the modem communication with disable DTR control.

Direct and modem communication condition.

Subject	**Direct communication**	**Modem communication**
Communication condition.	Data bits: 8 Parity : NONE Stop bits : 1	Data bits: 8 Parity : NONE Stop bits : 1
Cabling	Cross connection between PC and ECR.	Straight connection between PC and modem, ECR and modem.
Com port setting	Set profile (Ini file)	Set both profile (Ini file) and modem properties.
Baud rate setting	Set profile (Ini file)	Set modem properties.
How to use with DOS c_comw.exe or DLL c_comw/x.dll	Without -m option. For example, "R f.txt 4 -lo -dtk7000.ini -T"	With -m option. For example, "R f.txt 4 -lo –dtk7000.ini –T -m012-345-6789" See NOTE6-4.
How to use with Windows Dialog c_comw	Off check Dial modem.	Check Dial modem and set Dial number. Ex. [012-345-6789] See NOTE6-4.
How to use with profile (INI file) preset. Always use modem communication.	[ONLINE] section, set as TEL=0.	[ONLINE] section, set as TEL=1 and set as DIAL_COM=ATDxxxx xxxx is dial number..

It is also important to refer to the modem manual for modem connection.

NOTE 6-4: If you use modem with c_comw –m option or c_comw Dialog, please set INI file as not use modem, [ONLINE] section TEL= keyword as 0.

```
[ONLINE]
TEL=0
```

Chapter 7. Error code

7-1. The type of error

There are three types of error available for the communication.

1. PC side error
   For example, when a communication error happens between PC and ECR, DOS file does not exist. This kind of error logs into the “ecr.log” file. Refer to the “PC Error code map” shown below for each code.
2. ECR side error
   For example, ECR file does not exist. This kind of error is logged into the “ecr.log” file. Refer to ECR manual for each code.
3. Job response error
   For example, ECR can not make Z lock because registration is busy. This kind of error responses to response file (-o option). Refer to the ECR manual.

7-2. PC Error code

PC Error code map

Error code	Message string	Error Name on source	Windows Message ID	Win ID No.	Comment
0	Normal End	CERR_NONE	IDCERR_NONE	10001	
1	Normal Terminate.	CERR_TERMINATE	IDCERR_TERMINATE	10002	
2	Breaked by User.	CERR_BREAK	IDCERR_BREAK	10003	
4	Windows resource	CERR_WinRESOUCE	IDCERR_WinRESOUCE	10004	
100	from ECR. Illegal data.	CERR_fECR_RECV	IDCERR_fECR_RECV	10005	
101	from ECR. Illegal data type.	CERR_fECR_DTYPE	IDCERR_fECR_DTYPE	10006	
102	from ECR. Com char in bottom of packet.	CERR_fECR_BTMP	IDCERR_fECR_BTMP	10007	
103	from ECR. Over 0 count.	CERR_fECR_OVR0	IDCERR_fECR_OVR0	10008	
104	from ECR. Different machine.	CERR_fECR_DIFF	IDCERR_fECR_DIFF	10009	
105	from ECR. Memory over flow.	CERR_fECR_MEM_OVER	IDCERR_fECR_MEM_OVER	10010	
106	from ECR. Break end.	CERR_fECR_BREAK_BY_ECR	IDCERR_fECR_BREAK_BY_ECR	10011	
107	from ECR. PC disk write error.	CERR_fECR_PCDISK	IDCERR_fECR_PCDISK	10012	
108	from ECR. Sequence error.	CERR_fECR_SEQ	IDCERR_fECR_SEQ	10013	
128	CNET Reset error	CERR_ARC_RESET_POR	IDCERR_ARC_RESET_POR	10014	
129	CNET Reset RI error	CERR_ARC_RESET_RI	IDCERR_ARC_RESET_RI	10015	
130	CNET Reset ID error	CERR_ARC_RESET_ID	IDCERR_ARC_RESET_ID	10016	
131	CNET no token error	CERR_Arc_Send_NoToken_Err	IDCERR_Arc_Send_NoToken_Err	10017	
132	CNET packet size error	CERR_Arc_Send_Size_Err	IDCERR_Arc_Send_Size_Err	10018	
133	CNET TA retry error	CERR_Arc_Send_TA_Retry_Err	IDCERR_Arc_Send_TA_Retry_Err	10019	
144	TP NCB number over	CERR_TP_NCB_OVER	IDCERR_TP_NCB_OVER	10020	
145	TP Open error	CERR_TP_OPEN	IDCERR_TP_OPEN	10021	
146	TP Close error	CERR_TP_CLOSE	IDCERR_TP_CLOSE	10022	
147	TP Bind error	CERR_TP_BIND	IDCERR_TP_BIND	10023	
148	TP Heatbeat error	CERR_TP_HBEAT	IDCERR_TP_HBEAT	10024	
149	TP Not SYN received	CERR_TP_NOTSYNRECV	IDCERR_TP_NOTSYNRECV	10025	
150	TP Not connect	CERR_TP_NOTCONNECT	IDCERR_TP_NOTCONNECT	10026	
151	TP Not disconnect	CERR_TP_NOTDISCONNECT	IDCERR_TP_NOTDISCONNECT	10027	
152	TP Not NCB area	CERR_TP_NOTNCB	IDCERR_TP_NOTNCB	10028	
153	TP Retry over	CERR_TP_RETRYOVER	IDCERR_TP_RETRYOVER	10029	
154	TP RSPRETRY	CERR_TP_RSPRETRY	IDCERR_TP_RSPRETRY	10030	
155	TP Sequence error	CERR_TP_SEQERR	IDCERR_TP_SEQERR	10031	
156	TP ECR No port	CERR_TP_NOPORT	IDCERR_TP_NOPORT	10032	
157	TP Memory full	CERR_TP_MFULL	IDCERR_TP_MFULL	10033	
158	TP WAK Retry over	CERR_TP_WAK_RETRY_OVER	IDCERR_TP_WAK_RETRY_OVER	10034	
159	TP No active NCB	CERR_TP_NO_ACTIVE_NCB	IDCERR_TP_NO_ACTIVE_NCB	10035	
160	Terminal Busy	CERR_TP_TERMBUSY	IDCERR_TP_TERMBUSY	10036	
197	NO TARGET QUE	CERR_NOTGET_QUE	IDCERR_NOTGET_QUE	10037	
198	Communication time out	CERR_TIME_OUT	IDCERR_TIME_OUT	10038	
203	NO TARGET DSA	CERR_NOTGET_DSA	IDCERR_NOTGET_DSA	10039	
235	Inline protocol error				
1002	No File information in the profile (c_util.ini)	CERR_PC_NOT_IN_INI	IDCERR_PC_NOT_IN_INI	10041	

1007	Terminated by ECR.	CERR_PC_BREAK_BY_ECR	IDCERR_PC_BREAK_BY_ECR	10046	
1008	Impossible to convert data	CERR_PC_CNVERT	IDCERR_PC_CNVERT	10047	
1009	Illegal Format data	CERR_PC_FMT	IDCERR_PC_FMT	10048	
1015	No data record in the specified file.	CERR_PC_NO_DATA	IDCERR_PC_NO_DATA	10054	
1020	Can't open/create dos file	CERR_PC_DOS_OPEN	IDCERR_PC_DOS_OPEN	10059	
1021	Can't read Dos File.	CERR_PC_DOS_READ	IDCERR_PC_DOS_READ	10060	
1022	Can't write Dos File.	CERR_PC_DOS_WRITE	IDCERR_PC_DOS_WRITE	10061	
1023	Can't seek dos file	CERR_PC_DOS_SEEK	IDCERR_PC_DOS_SEEK	10062	
1026	End Of Line not found in DOS file	CERR_PC_DOS_NO_END	IDCERR_PC_DOS_NO_END	10065	
1027	C_NETDRV not resident	CERR_PC_NO_DRIVER	IDCERR_PC_NO_DRIVER	10066	
1031	Can't Convert Memory Data	CERR_PC_DO_NOT_CNV_MEM	IDCERR_PC_DO_NOT_CNV_MEM	10070	
1032	Record length don't match	CERR_PC_REC_LEN	IDCERR_PC_REC_LEN	10071	
1034	Com_ReTryOver	CERR_PC_RETRYOVER	IDCERR_PC_RETRYOVER	10073	
1040	Can not open windows serial port	CERR_ON_PORT_OPEN	IDCERR_ON_PORT_OPEN	10079	
1041	Windows serial port initialize error	CERR_ON_PARAM_OPEN	IDCERR_ON_PARAM_OPEN	10078	
1045	Online overlapped I/O event creation failed	CERR_OS_EVNT_CREATE	IDCERR_OS_EVNT_CREATE	10094	
1046	Online overlapped I/O secondary thread creation failed	CERR_ON_THREAD_CREATIO N	IDCERR_ON_THREAD_CREATION	10095	
2049	Abrupt file end	CERR_END_OF_FILE	IDCERR_END_OF_FILE	10075	
2050	No change in file	CERR_FILE_NO_CHANGE	IDCERR_FILE_NO_CHANGE	10076	
2051	No change in record	CERR_RECD_NO_CHANGE	IDCERR_RECD_NO_CHANGE	10077	
2052	Not enough memory available	CERR_PC_NO_MEMORY	IDCERR_PC_NO_MEMORY	10093	
3001	Unknown line kinds.	CERR_LINEKINDS	IDCERR_LINEKINDS	10081	
3002	Unknown Receive/Send mode.	CERR_RSMODE	IDCERR_RSMODE	10082	
3003	Not defined file number.	CERR_NOFILENO	IDCERR_NOFILENO	10083	
3004	Not defined file name.	CERR_NOFILENAME	IDCERR_NOFILENAME	10084	
3005	Not found profile (c_util.ini)	CERR_PROFILENAME	IDCERR_PROFILENAME	10085	
3006	Not found terminal number	CERR_NOTERMNO	IDCERR_NOTERMNO	10086	
4001	Invalid com port specified in INI file	CERR_INVALID_COM_PORT	IDCERR_INVALID_COM_PORT	10087	
4002	Invalid baud rate specified in INI file	CERR_INVALID_SPEED	IDCERR_INVALID_SPEED	10088	
4003	Invalid parity specified in INI file	CERR_INVALID_PARITY	IDCERR_INVALID_PARITY	10089	
4004	Invalid byte length specified in INI file	CERR_INVALID_BYTE_LENGT H	IDCERR_INVALID_BYTE_LENGTH	10090	
4500	Received SYN	CERR_NET_SYN_RECV	IDCERR_NET_SYN_RECV	10096	
4501	Received FIN	CERR_NET_FIN_RECV	IDCERR_NET_FIN_RECV	10097	
4502	End of File on rf_read()	CERR_NET_EOF	IDCERR_NET_EOF	10098	
4503	Parameter Error	CERR_NET_ERR_PARAM	IDCERR_NET_ERR_PARAM	10099	
4504	Timeout Error (User Timer)	CERR_NET_ERR_TIMEDOUT	IDCERR_NET_ERR_TIMEDOUT	10100	
4505	ID Error	CERR_NET_ERR_IDOVER	IDCERR_NET_ERR_IDOVER	10101	
4506	Packet or protocol error	CERR_NET_ERR_OTHERPKT	IDCERR_NET_ERR_OTHERPKT	10102	
4507	Other ID Error	CERR_NET_ERR_OTHERSID	IDCERR_NET_ERR_OTHERSID	10103	
4508	Wak Receive Error	CERR_NET_ERR_WAK	IDCERR_NET_ERR_WAK	10116	
4509	Other Data Receive Error	CERR_NET_ERR_OTHERDATA	IDCERR_NET_ERR_OTHERDATA	10104	
4510	Sequence Error	CERR_NET_ERR_SEQERR	IDCERR_NET_ERR_SEQERR	10105	
4511	Length Error	CERR_NET_ERR_PKFMT	IDCERR_NET_ERR_PKFMT	10106	
4512	XMODEM 5Sec Timer Error	CERR_NET_ERR_5SEC	IDCERR_NET_ERR_5SEC	10107	
4513	Time Out Error	CERR_NET_ERR_NTIMER	IDCERR_NET_ERR_NTIMER	10108	
4514	Re-transmission failure(by Sequence No.)	CERR_NET_ERR_RETRY	IDCERR_NET_ERR_RETRY	10109	
4515	SYN Receive Error	CERR_NET_ERR_SYN	IDCERR_NET_ERR_SYN	10110	
4516	FIN Receive Error	CERR_NET_ERR_FIN	IDCERR_NET_ERR_FIN	10111	

4517	Not Used	CERR_NET_ERR_RFSEQ	IDCERR_NET_ERR_RFSEQ	10112	
4518	Received RF Command error	CERR_NET_ERR_RFCMDRCV	IDCERR_NET_ERR_RFCMDRCV	10113	
4519	Disable Transmit Error	CERR_NET_ERR_FINSTAT	IDCERR_NET_ERR_FINSTAT	10114	
4520	Length Error (rf data)	CERR_NET_ERR_RFFMT	IDCERR_NET_ERR_RFFMT	10115	
4521	Socket Connect Error.				
4522	Socket Receive Error.				
4600	JobCommand : ECR is busy	CERR_RES_STS_BUSY	IDCERR_RES_STS_BUSY	10117	
4601	JobCommand : ECR Z locked	CERR_RES_STS_ZLOCK	IDCERR_RES_STS_ZLOCK	10118	
4602	Job Command : Console Busy	CERR_RES_STS_CONSOL_BUSY	IDCERR_RES_STS_CONSOL_BUSY	10119	
4603	Job Command : Command Error	CERR_RES_STS_CMDERR	IDCERR_RES_STS_CMDERR	10120	
4604	Job Command : File Error	CERR_RES_STS_FILEERR	IDCERR_RES_STS_FILEERR	10121	
6001	Not defined Job Number	CERR_NOT_DEFINED_JOBNO			
6002	XZ mode should be either 0(x mode) or 1(zmode).	CERR_XZMODE			
6003	Master status should be either 81 or 80	CERR_MASTER_STATUS			
6004	Date should be yymmdd format.	CERR_INVALID_DATE			
6005	Time should be hhmmss format.	CERR_INVALID_TIME			
6500	FTP Connect error	CERR_FTP_CONNECT			
6501	FTP ECR file can not open error	CERR_FTP_FILE_OPEN_ERROR			
6502	FTP Read communication error	CERR_FTP_READ			
6503	FTP Write communication error	CERR_FTP_WRITE			
6505	FTP Password error	CERR_FTP_INCORRECT_PASSWORD			*1
6506	FTP server error (Normaly bad login name)	CERR_FTP_INTERNET_EXTEND_ERR			*1
6507	FTP Response error by ECR	CERR_FTP_RESPONSE			
9996	DLL load failed	CERR_DLL_LOAD			
9997	Unknown Machine type or no profile.	CERR_UNKNOWN_MACHINE	IDCERR_UNKNOWN_MACHINE	10122	
9998	Unknown parameters	CERR_UNKNOWN_PARMS	IDCERR_UNKNOWN_PARMS	10091	
9999	Unknown error code or environment error	CERR_PC_UNKNOWN	IDCERR_PC_UNKNOWN	10092	

*1:QT response login or password error takes 2 seconds. If INI file section [FTP], key RW_TIMEOUT= or key CTRL_TIMEOUT= is too small, ftp connection goes error 6500.

Chapter 8. Profile (INI file) and Machine ID

8-1. INI file

Profile values are very important for communication utility and CV10. Some value you can change for your environment, but some values must not be changed.

Profile section and keyword.

Section	Key word	data sample for QT/TE	data sample for TK7000/TE-M†	Explanation
[DLL_NAMES]				
	C_COMW=	c_comw.dll	-	Internal DLL file name. Do not change this value.
	JOBCMD=	jobcmd.dll	475jcmd.dll	Internal DLL file name for Job command. Do not change this value.
	C_COMWX=	c_comwx.dll	-	Internal DLL file name. Do not change this value.
	C_PARM_RG=	c_parmrg.dll	c_parmrg.dll	Internal DLL file name. Do not change this value.
	C_COM_BDY=	c_combdy.dll	c_combdy.dll	Internal DLL file name. Do not change this value.
	C_CNVW=	c_cnvw.dll	c_cnvw.dll	Internal DLL file name for Text conversion. Do not change this value.
	C_ADDW=	c_addw.dll	c_addw.dll	Internal DLL file name. Do not change this value.
[PASSWORD]				
	PASSWORD=			Password string, if you want to use. Please care also ECR side preset.
[SYSTEM]				
	MACHINE_TYPE=	32	23	ECR Machine type. See another matrix.
	LOG=	ECR.LOG	ECR.LOG	DOS result Log file name.
	LANGUAGE=	4	4	Character type of ECR. 0:CASIO, Do not change this value. For reference..., 1:CASIO(Japan), 2:CASIO(Japan/TK5100) 3:CASIO(Korea), 4:ASCII(New CASIO), 5:ASCII(Shift JIS Non support).
	STRATREC=	1	1	Start Rec No. for TEXT file. Normally from record number 1.
	COMPRESS=	ON	ON	Compress received (communication) data.
	ONLINE=	ON	ON	Use Online system.
	STDCOM=	ON	ON	Use Standard COM port system. (Just compatible with VHS system)
	INLINE=	ON	OFF	Use PC-ECR INLINE system.
	COMMUNICATION=	1	1	
	nmh=	1	0	Location of PGM1000.900.(TK7000) 0=CVW root,1=STORE¥PROGRAM
	PLU_SHIFT=	0	1	Scanning PLU shift function. 0=not available,1=available
[DISPLAY]				Just compatible with DOS c_online.exe. No meaning for Windows tool.
	DISPTYPE=	0	-	No meaning now.
	X_START=	10	-	No meaning now.
	Y_START=	3	-	No meaning now.
	X_WIDTH=	50	-	No meaning now.
	Y_WIDTH=	5	-	No meaning now.

[ONLINE]				
	TARGET=	-	1	
	COM=	1	1	PC RS232C Port. COM=1 or COM=2. In case of use mode, please set this value also as modem port. **Please change for your PC environment.**
	SPEED=	115200	19200	Select online communication baud rate. **Please change for your PC environment.** If you change this value, please care ECR preset value also. **SPEED** is valid for IPL.
	DELAY=	5	-	USED for Uploading only
	TEL=	0	0	DIAL_COM For dialing modem. 0: Direct communication or part time use modem (with –m option). 1: Always use modem. **Please change for your modem system environment.**
	DIAL_COM=	ATDxxxxxx	012-345-6789	AT Command For dialing modem. (Available in case of TEL=1). **Please change for your modem system environment.**
	CTS_FLOW=	OFF	OFF	XMODEM active CTS line control. Do not change this value.
	DSR_FLOW=	OFF	OFF	XMODEM active DSR line control. Do not change this value.
	CD_FLOW=	OFF	OFF	XMODEM active CD line control. Exist only compatible with DOS c_online.exe and modem communication. Do not change this value.
	PARITY=	-	0	
	BYTE_LENGTH=	-	8	
	XMODE=	CRC1024	-	XMODEM Check SUM = CRC1024(VHS/QT/TE-H) or SUM128(CE4000)
	BUSYRETRY=	-	ON	RF JOB Command check and wait busy status. Also available for Z receive.
[INLINE]				
	TARGET=	1	-	Default inline target ECR terminal number.
	ECRS=	32	-	Number of ECRS in inline. Use for define terminal number as ALL
[TCP/IP]				
	ECRnn=	192.168.0.n	192.168.0.n	ECR terminal No and IP address. This is reference value when –t option used. Defined from ECR01= to ECR32=
	DELAY=	10	-	Send packet interval. Msec unit.
	FTPPORTnn=	21	-	ECR terminal No and FTP Connect Port No. This is reference value when –t option used with FTP communication.
[Com default]				
	MenuDirectory=	-	C:¥CVW¥TK7000.INI	
	MenuRcvSnd=	-	1	
	MenuFileNo=	-	1	
	MenuLinekinds=	-	0	
	MenuTermNo=	-		
	MenuFilename=	-	FILE001P.DAT	
	MenuConsolidate=	-	2	
	MenuInit=	-	0	
	MenuText=	-	0	
	MenuFileNoED=	-	0	
	MenuTermNoED=	-	2	

[FTP]				
	PASSIVE=	-	OFF	FTP passive mode ON/OFF. Up to Ver4.01, this key is required also define at [FILE_INF] section. Ver4.10+ is not required define at [FILE_INF] section, but only [FTP] section.
	RW_TIMEOUT=	-	100000	Data port timeout (msec)
	CTRL_TIMEOUT=	-	100000	Control port timeout (msec)
[CF]				
	FOLDER_AUTOPGM=	D:¥CASIO¥QT6600¥AUTOPGM		CF AUTOPGM folder name
	FOLDER_X=	D:¥CASIO¥QT6600¥XZ		CF X folder name
	FOLDER_Z=	Z=D:¥CASIO¥QT6600¥XZ		CF Z folder name
	Z=	“Z”	=”精算”	MID-Low XZ Z string
	DATE=	MMDDYY	=YYMMDD	MID-Low XZ date order
[COMDIALOG]				
	DIALOG_FONT=			Show font
	SHOWDIALOG=		ON	Show dialog sw
	CANCELCAPTION=			Cancel button message
	MESSJ=			JOB Command message
	loMESSU=			Online upload message
	loMESSD=			Online download message
	loMESSC=			Online create message
	liMESSU=			Inline upload message
	liMESSD=			Inline download message
	liMESSC=			Inline create message
	lfMESSU=			Ftp upload message
	lfMESSD=			Ftp download message
	llMESSU=			Local upload message
	llMESSD=			Local download message
	lcMESSU=			CF upload message
	lcMESSD=			CF download message
[TABLE]				
	ssH=	ddH	ddH	Use for conversion tool with special character. ss is ECR character code. dd is PC character code. When converting binary to text, convert ss code to dd code. When converting text to binary, convert dd code to ss code. The code which is not defined by this section, no special character conversion works.
[MAC_CODE]				
	ADD_MODE =	2	2	Add mode used for PRICE field. Specify an appropriate value to your country.
[FIELD_INF]				
	QTYFIELDS=	1,5,17	1,9,124	QTY Field names (n1,n2,n3,...nn). Do not change the default values.
	CHARFIELDS=	6,88,89,200	13	Character Field names (n1,n2,n3,...nn). Do not change the default values.
	PRICEFIELDS=	8,15,17	15	Price Field names. (n1,n2,n3,...nn). Do not change the default values.
	PLUCODEFIELDS=	-	34	Do not change the default values.

	BITFIELDS=	-	14,27,33,...	Do not change the default values.
	XZ_NONFIELDS=		-	▲Ver4.20 The PGM field name defined here is excluded from X/Z text file. (See **NOTE A**2-2)
	XZ_NUMFIELDS=	11,86		▲Ver4.20 The PGM field name defined here is displayed in the X/Z text file without double quotation marks. (See **NOTE A**2-2)
	XZ_PGMFIELDS=	19,59,73,74	-	▲Ver4.20 The PGM field name defined here is displayed in the X/Z text file with double quotation marks. (See **NOTE A**2-2)
[FILE_INF]				
	RECEIVEFILE=	1	1	Do not change the default values.
	SENDFILE=	1	1	Do not change the default values.
	DATAFILES=	90,92,93,47	900	Data(Binary) files. The files defined at this parameter can not be converted to text.
	MEMORY=	90	900	Do not change the default values.
	PGMICONS=	1,2,3,...	1,2,3,...	Do not change the default values.
	XZICONS=	0,1,2,3,...	11,12,13...	Do not change the default values.
	SPECIALFILES=	-	22,98	Do not change the default values.
	PASSIVE=	-	OFF	FTP passive mode ON/OFF. Up to Ver4.01, This definition is required both [FTP] and [FILE_INF] section. Ver4.10+ is required only [FTP] section.
[PGMICONTITLE]				Used for CV10.
	(file number)=	(Explanation)	(Explanation)	Do not change the default values.
[PGMFILES]				Presentable files.
	(file number)=	(Explanation)	(Explanation)	Do not change the default values.
[XZFILES]				X/Z calculation code. (Normally, file number + 10)
	(XZ code)=	(Explanation)	(Explanation)	Do not change the default values.
[XZCNV_TABLE]				Convert X/Z code and file number. Used for CE/TK/TE-M† series.
	(XZ code)=	-	(File number)	Do not change the default values.
[FIELD_TITLES]				Used for CV10.
	(Field number)=	(Explanation)	(Explanation)	Do not change the default values.
[ZCLR_TABLE]				
[(file name)] (Example FILE0004)				This section will be automatically updated with -i option when converting binary to text.
	ALL_FIELD_NUM =	Number of all fields.	Number of all fields.	You do not have to update manually.
	PGM_FIELD_NUM =	Number of presentable fields.	Number of presentable fields.	You do not have to update manually.
	STK_FIELD_NUM =	Number of stock fields.	Number of stock fields.	You do not have to update manually.
	CAL_FIELD_NUM =	Number of calculation fields.	Number of calculation fields.	You do not have to update manually.
	FnnN =	Field number, ,P/S/C/D	Field number, ,P/S/C/D	You do not have to update manually.
	FnnL =	Field length (bytes)	Field length (bytes)	You do not have to update manually.

[(file name)_XZ] (Example, FILE0016_XZ)				This section will be automatically updated with -i option when converting binary to text.
	XZ_ADD_FIELD= 01,03	(Non support)	Append field location.	If you want to append extra fields to X/Z receive data, **please set extra field location**. For example, 1 means most left field. (See **NOTE A2-1**)
[LANGUAGE]	JAPANESE=	0411,ＭＳ ゴシック		Font(PGMEDIT.EXE) Country name=Country code,Font
[G_LOGO]	FILE47_D= FILE47_S=	432,208 432,104		Header file name=width,height(QT/TE-H)
	FILE67=	432,168		
	FILE68=	432,168		
	FILE47=			Header file name=width,height(384,168 for TE100 series.)
[IPL]	STARTWAIT=	130		Wait time from cnnection to communication start.
	SENDWAIT=	0		Wait time from packet to packet.
	ENDWAIT=	5000		Wait time from communication end to disconnection. (QT/TE-H)
	FLOW_CTRL=	NO		Flow control “YES” or “NO” (QT/TE-H)
[JMEMO]	JMEMOCMD=	0058		EJ file No.
	JMEMOCNV=	OFF		Do convert received file to EJ view format. Do not use this keyword with CV-10.

NOTE A2-1

It is not possible to append fields of a file to X/Z sales data of a different file. Only fields in the same file can be appended by this function.

Standard X receive for FILE0016

```
"C","n:X0026:"
"H","27","01","0000","010201","1912","0001","01","02","00003","00000","00000","00000"
"F","FILE016","X","D"
00001,4.0000,196.00
00002,10.0000,23.00
00003,8.0000,240.00
```

X receive with PLU code for FILE0016

Preset as. **[FILE0016_XZ]**
XZ_ADD_FIELD=01

```
"C","n:X0026:"
"H","27","01","0000","010201","1913","0001","01","02","00003","00000","00000","00000"
"F","FILE016","X","D"
00001,"4900000000016E",4.0000,196.00
00002,"4900000000023E",10.0000,23.00
00003,"4900000000030E",8.0000,240.00
```

X receive with PLU code and character for FILE0016

Preset as. **[FILE0016_XZ]**
XZ_ADD_FIELD=01,03

```
"C","n:X0026:"
"H","27","01","0000","010201","1913","0001","01","02","00003","00000","00000","00000"
"F","FILE016","X","D"
00001,"4900000000016E","SCAN PLU 4916    ",4.0000,196.00
00002,"4900000000023E","SCAN PLU 4923    ",10.0000,23.00
00003,"4900000000030E","SCAN PLU 4930    ",8.0000,240.00
```

NOTE A2-2

These items are effective to X/Z text files with RS232C or TCP/IP. Only QT-6000, QT-6100 and QT-6600 support these items. If you want to change format, you can change like examples.

example 1.

Preset as. **[FIELD_INF]**
XZ_NONFIELDS=
XZ_NUMFIELDS=11,86
XZ_PGMFIELDS= 19,59,73,74

(1)FILE002

FUNCTION CODE=86

000001,72,0.0000,0.00
000002,148,0.0000,0.00

(2)FILE004

RANDOM CODE=11

000001,123456,0.0000,0.00,0.00,0.0000,0.0000
000002,0,0.0000,0.00,0.00,0.0000,0.0000

(3)FILE005

000001,111111,0.0000,0.00,0.00
000002,0,0.0000,0.00,0.00

(4)FILE016

OBR CODE=19, CLK No=59, Time in=73, Time out=74

000001,"49177008EEEE",2.0000,2.40,0.00,"00",
0.0000,0.00,0.00,
0.0000,0.00,0.00,
0.0000,0.00,0.00,
0.0000,0.00,0.00,
0.0000,0.00,0.00,
0.0000,0.00,0.00,
0.0000,"000000","000000"

(Each parameter is consecutive in the actual file.)

example 2.(german format)

Preset as. **[FIELD_INF]**
XZ_NONFIELDS=
XZ_NUMFIELDS=19,11,86
XZ_PGMFIELDS= 73,74

(1)FILE002

```
00001,72,0.0000,0.00
00002,72,0.0000,0.00
```

(2)FILE004

```
00001,123456,2.0000,24.68,0.00,0.00,0.0000
00002,987654,1.0000,0.12,0.00,0.00,0.0000
```

(3)FILE005

```
00001,111222,1.0000,1.50,0.00
```

(4)FILE016

```
000001,49177008EEEE,2.0000,2.40,0.00,"00",
                              0.0000,0.00,0.00,
                              0.0000,0.00,0.00,
                              0.0000,0.00,0.00,
                              0.0000,0.00,0.00,
                              0.0000,0.00,0.00,
                              0.0000,0.00,0.00,
                              0.0000,"000000","000000"
```

(Each parameter is consecutive in the actual file.)

8-2. Machine ID

Machine ID value.

Machine ID	Product name
01	CE-4700
02	TK-2300
03	TK-2700
04	TK-5100
05	CE-4300
06	CE-4800
07	TK-1400
08	TK-1300
09	
10	TK-2400
11	CE-6000 Japanese
12	CE-7000/7500 Japanese
13	TK-6000 Japanese
14	TK-7000/7500 Japanese
15	
16	CE-4000
17	CE-300/TE-100/TE-2000
18	TK-800/TKT200/TKT-500
19	FE-800
20	CE-6000/6100
21	CE-7000
22	TK-6000
23	TK-7000
24	TK-6500
25	TK-7500
26	CE-T300/TE3000S/ TE-2200/TE-2400/TK3200
27	TK-T500/TE4000F/4500F
28	FE-500
29	TE-100/TE-2000 Japanese
30	TKT200/TKT-500 Japanese
31	
32	QT-2000/2100/6000/ TE-7000S/8000F/8500F
35	TE-900/1500/TK-950/1550/SE-S3 00/2000/SE-C300/2000
36	QT-6600
37	SE-C6000/SE-S6000
254	

Caution:

This chart just explains the internal ECR ID number and it does not indicate that all models can be communicated.

Chapter 9. File Format

9-1. Outline

There are three types of data, which you get in a PC with the communication DLL.

1. Text data (Received data from ECR with –T option)
This type of data is created in a PC when receiving a program or a sales data from the ECR with –T option. You can open the text data in a PC by text editor and can send back the data to the ECR.

2. Binary data (Received packed data without –T option)
This type of data is created in a PC when receiving a program or sales data from the ECR without –T option. As the binary data requires lesser capacity than the text data, you can economize disk space.
FILE90/900:
These files should be basically received as binary data, not text data. Once you receive them as text data (with –T option), they cannot be sent back to the ECR.
FILE90 is all of file/data with the QT/TE-H.
FILE90 is all of file/data except system files and FILE900 is all of file/data with CE/TK/TE-M† models.

3. PGM_1000.XXX file (Created file when receiving the FILE90/900/92. CE/TK/TE-M† only)
The PGM_1000.XXX file is created in a PC when receiving the FILE90, 900 or 92. “Pgm_1000.090” is created for FILE90. “Pgm_1000.900” file for FILE900 and “Pgm_1000.092” file for FILE92.
The file includes information on records, which are reserved in each file inside the ECR. The ECR automatically allocates records in each file according to the information when receiving the FILE90 or 900 from a PC. The record allocating is not made with the FILE92.

As the PGM_1000.XXX file is updated every time a PC receives the FILE90, 900 or 92, keep each PGM_1000.XXX file. This is because the PGM_1000.XXX that you got in a PC when receiving the FILEXXX should be used for sending the FILEXXX back the ECR.

Example)
When backup from ECR
Connect with TK7000/TE-M†
>C_comw R f900tk7.dat 900 –lo –dc:¥cvw¥tk7000.ini
>copy pgm_1000.900 pgm_1000.tk7
Connect with CE6000
>C_comw R f900ce6.dat 900 –lo –dc:¥cvw¥ce6000.ini
>copy pgm_1000.900 pgm_1000.ce6
When send back to ECR.
Connect withTK7000/TE-M†
>copy pgm_1000.tk7 pgm_1000.900
>C_comw S f900tk7.dat 900 –lo –dc:¥cvw¥tk7000.ini

9-2. Text data format

Structure of text data.

1st line: 'C' Command header line
2nd line: 'H' Data header line
3rd line: 'F' File xx header line
4th line: Record number 1 data line.
5th line: Record number 2 data line.
6th line: Record number 3 data line.
until
m0 line: Record number n data line.
m1 line: 'F' File yy header line
m2 line: Record number 1 data line.
until
mn line: Record number n data line.

Command header

"C","n:P0004:"

- File number/XZ code.
- P: Program data.
- X: X data.
- Z: Z data.
- Compress mode (No meaning)

Data header

"H","25","01","0000","001128","1144","0004","01","02","00000","00000","00000","00000"

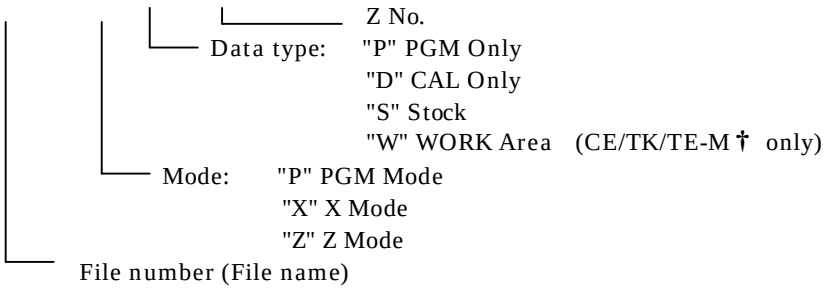
- Reserved (CE/TK/TE-M† only)
- Add mode.
- CHR (Normal:01/Scanning PLU:00)
- System Z counter (not used)
- Received Time (HH/MM)
- Received Date (YY/MM/DD)
- Store No
- Machine ID
- Machine Type

[QT-6600/SE-C6000/SE-S6000]
"h","36","01","0000","001128","1144","0004","01","02","1234"

- ECR Version code
- Add mode.
- CHR (Normal:01/Scanning PLU:00)
- System Z counter (not used)
- Received Time (HH/MM)
- Received Date (YY/MM/DD)
- Store No
- Machine ID
- Machine Type

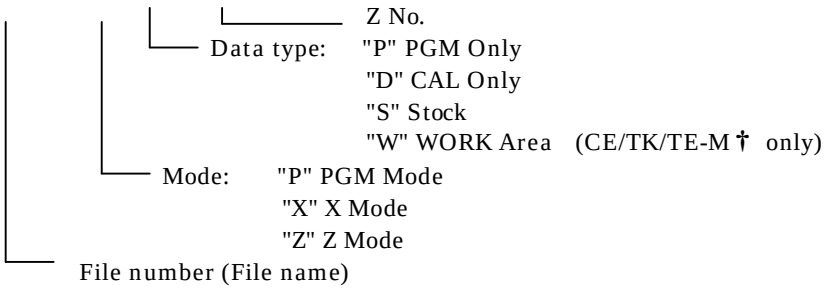
File header

"F","FILE004","P","P",”0001”



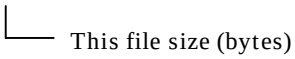
[QT-6600/SE-C6000/SE-S6000]

"f","FILE004","P","P",”0001”



File size (FTP protocol level only, not c_comw output file)

"S","1361"



This is used for check received file size is correct or not.

Sample PGM Text data of TK7000 PLU

```
"C","n:P0004:"
"H","25","01","0000","001128","1144","0004","01","02","00000","00000","00000","00000"
"F","FILE004","P","P",”0001”
00001,"PLU0001          ","00000000000000","000000","000000","000100","000001",...
00002,"PLU0002          ","00000000000000","000000","000000","000200","000002",...
00003,"PLU0003          ","00000000000000","000000","000000","000000","000003",...
00004,"PLU0004          ","00000000000000","000000","000000","000000","000004",...
00005,"PLU0005          ","00000000000000","000000","000000","000000","000005",...
00006,"PLU0006          ","00000000000000","000000","000000","000000","000006",...
00007,"PLU0007          ","00000000000000","000000","000000","000000","000007",...
00008,"PLU0008          ","00000000000000","000000","000000","000000","000008",...
00009,"PLU0009          ","00000000000000","000000","000000","000000","000009",...
      (until end of record.....)
```

Sample X Text data of TK7000 PLU.

```
"C","n:X0014:"
"H","25","01","0000","001128","1145","0004","01","02","00000","00000","00000","00000"
"F","FILE004","X","D",”0001”
00001,1,20.0000,20.00,0.00,0.00,0.00
00002,2,3.0000,6.00,0.00,0.00,0.00
00003,3,0.0000,0.00,0.00,0.00,0.00
00004,4,0.0000,0.00,0.00,0.00,0.00
00005,5,0.0000,0.00,0.00,0.00,0.00
00006,6,0.0000,0.00,0.00,0.00,0.00
      (until end of record.....)
```

Sample Z Text data of TK7000 PLU.

```
"C","n:Z0014:"
"H","25","01","0000","001128","1145","0004","01","02","00000","00000","00000","00000"
"F","FILE004","Z","D",”0001”
00001,1,20.0000,20.00,0.00,0.00,0.00
00002,2,3.0000,6.00,0.00,0.00,0.00
00003,3,0.0000,0.00,0.00,0.00,0.00
00004,4,0.0000,0.00,0.00,0.00,0.00
00005,5,0.0000,0.00,0.00,0.00,0.00
      (until end of record.....)
```

Sample PGM Text data of QT/TE-H PLU

```
"C","c:P0004:"
"H","32","01","0000","081128","1234","0000","00","02"
"F","FILE004","P","P","0001"
00001,"PLU001                ","00000000000000","000000","000000","000.....
00002,"PLU002                ","00000000000000","000000","000000","000.....
00003,"PLU003                ","00000000000000","000000","000000","000.....
00004,"PLU004                ","00000000000000","000000","000000","000.....
00005,"PLU005                ","00000000000000","000000","000000","000.....

[QT-6600]
"C","c:P0004:"
"h","36","01","0000","081128","1234","0000","00","02","4541"
"f","FILE004","P","P","0001"
000001,"PLU001                ","00000000000000000000","000000","000000","000.....
000002,"PLU002                ","00000000000000000000","000000","000000","000.....
000003,"PLU003                ","00000000000000000000","000000","000000","000.....
000004,"PLU004                ","00000000000000000000","000000","000000","000.....
000005,"PLU005                ","00000000000000000000","000000","000000","000.....
```

Sample Z Text data of QT/TE-H PLU

```
"C","c:X0014:"
"H","32","01","0000","081128","1309","0000","00","02"
"F","FILE004","X","D","0001"
00001,0.0000,0.00,0.00,0.00,0.0000
00002,0.0000,0.00,0.00,0.00,0.0000
00003,0.0000,0.00,0.00,0.00,0.0000
00004,0.0000,0.00,0.00,0.00,0.0000
00005,0.0000,0.00,0.00,0.00,0.0000

[QT-6600]
"C","c:X0014:"
"h","36","01","0000","081128","1308","0000","00","02","4541"
"f","FILE004","X","D","0001"
000001,0.00,0.0000,0.00,0.00,0.00,0.00
000002,0.00,0.0000,0.00,0.00,0.00,0.00
000003,0.00,0.0000,0.00,0.00,0.00,0.00
000004,0.00,0.0000,0.00,0.00,0.00,0.00
000005,0.00,0.0000,0.00,0.00,0.00,0.00
000006,0.00,0.0000,0.00,0.00,0.00,0.00
```

NOTE A3-1

If you prepare text program data with non-sequential record, you can send only existing record for auto program.

For example send (S command) the following text file, PC sends only No.2,3,5 and No.7 records to ECR.

```
"C","n:P0004:"
"H","25","01","0000","001128","1144","0004","01","02","00000","00000","00000","00000"
"F","FILE004","P","P","0001"
00002,"PLU0002          ","00000000000000","000000","000000","000200","000002",...
00003,"PLU0003          ","00000000000000","000000","000000","000000","000003",...
00005,"PLU0005          ","00000000000000","000000","000000","000000","000005",...
00007,"PLU0007          ","00000000000000","000000","000000","000000","000007",...
```

9-3. PGM_1000.XXX file format (CE/TK/TE-M only)

The PGM_1000.XXX file is saved as binary format.

The file includes consists of the
[FILENAME (ASCII 11bytes)]
[File creation (ASCII 1byte)]
[Number of record (Intel long 4bytes)]
[Machine ID (Binary 1byte)]

FILENAME:
File name used at ECR inside, for example, FILE0004
File creation:
"C" is stored in this field in Pgm_1000.090 and Pgm_1000.900. If "C" is in the field, the ECR creates the file with records specified in the [Number of record] field when the file 90/900 is sent back from a PC.
No "C" is stored in the field in Pgm1000.092. Without the "C", the ECR does not perform the file creation.
Number of record:
When a PC receives the file 90, 900 or 92 from the ECR, the same number is automatically stored in this field as it is allocated in the ECR.
Machine ID:
Target Machine ID. Please see Appendix 2.

9-4. Binary data format

Binary data file has following structure.

Header (128 bytes)
DATA1 'H','I','F' (Variable size)
DATA2 'I','F' (Variable size)
……
DATAn 'I','F' (Variable size)

Header:

Header size is 128bytes fixed. Header has compress information, AUTOPGM/XZ, file number or XZ code.
This area will be text converted as "C" line.
Data Example: "n:P0004:"……..."P0n"

DATA:

DATA has sections H, I and F.
ECR record data is F section.

(1) H section: Data total header.

This area will be text converted as "H" line.

QT/MID-HIGH/LOWEND series

'H'	MC	ID	Store No	DateTime	Notuse	CHAR	ADD	Notuse
1byte	1byte	1byte	2 byte	5 bytes	2 bytes	1 byte	1byte	2 byte

QT-6600/SE-C6000/SE-S6000

'h'	MC	ID	Store No	DateTime	Notuse	CHAR	ADD	Notuse	ECRver
1byte	1byte	1byte	2 byte	5 bytes	2 bytes	1 byte	1byte	2 byte	16 byte

MID-MID series

'H'	MC	ID	Store No	DateTime	Notuse	CHAR	ADD	Notuse
1byte	1byte	1byte	2 byte	5 bytes	2 bytes	1 byte	1byte	2 bytes
Sinf-1	Sinf-2	Sinf-3	Sinf-4					
2bytes	2bytes	2bytes	2 bytes					

MC:	ECR type id defined ECR mode. Some ECR has same MC.
ID:	Machine number. Specified by ECR preset.
Store No.:	Specified by ECR preset.
DateTime (BCD/5):	YYMMDDHHMM date time data. BCD type.
CHAR:	Character length. Set 0.
ADD:	Add mode for amount.

Sinf-1：　　Scanning PLU information. (Variable record size).
Sinf-2：　　Scanning PLU information. (Deleted record size).
Sinf-3：　　Scanning PLU information for NFP. Not used.
Sinf-4：　　Scanning PLU information for NFP. Not used.
ECRver：　　ECR application R&D version number.

(2) I section: File field information.

No text convert.
But with –I option, update INI file field information.

'I'	LEN	FNO	CLEN	ALL	PGM	STK	CAL	F1N	F1L	F2N	F2L	*	FnL
1byte	Bin/2bytes	2bytes	1byte	1byte	1byte	1byte	1byte	1byte	1byte	1byte	1byte		1byte

LEN size area (Field information)

QT-6600/SE-C6000/SE-S6000

'i'	LEN	FNO	CLEN	ALL	PGM	STK	CAL	F1N	F1L	F2N	F2L	*	FnL
1byte	Bin/2bytes	2bytes	1byte	1byte	1byte	1byte	1byte	2byte	1byte	2byte	1byte		1byte

LEN size area (Field information)

LEN(BIN/2):　　Field information size.
FNO(2):　　File number.
CLEN:　　Character length. Not used.
ALL:　　Number of all fields.
PGM:　　Number of PGM fields.
STK:　　Number of Stock fields.
CAL:　　Number of calculation fields.
FnN:　　N field ID (name).
FnL:　　N field length (bytes)

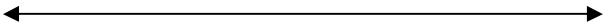
Field order is PGM/STK/CAL/WORK.

(3) F section: Record data.

This area will be text converted as “F” and records lines.

‘F’	FNO	Type	Z counter	LEN	Start Rec	End Rec
1byte	2bytes	1byte	2bytes	2bytes	2bytes	2bytes

Record data (Start Rec)
Record data (Start Rec+1)
Record data (Start Rec+2)
****
Record data (End Rec)

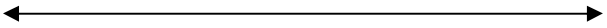


LEN size area (1 record size)

QT-6600/SE-C6000/SE-S6000

‘f’	FNO	Type	Z counter	LEN	Start Rec	End Rec
1byte	2bytes	1byte	2bytes	4bytes	4bytes	4bytes

Record data (Start Rec)
Record data (Start Rec+1)
Record data (Start Rec+2)
****
Record data (End Rec)



LEN size area (1 record size)

FNO (BIN/2): File number..
Type (1): Contents.
=1: PGM data only.
=2: Stock data only.
=3: Calculation data only.
=4: Unit price data only.
=5: All fields.
=6: Random code and character and calculation.
=7: Character and calculation.
Z counter (BCD/2): File Z counter.
LEN (BIN/2): 1 record size.
Start Rec. (BIN/2): Data start record number.
End Rec. (BIN/2): Data end record number.

(4) Binary data compress.

Binary data can be compressed 0 data.
How to compress is as follows.

1. Compress is done by elements.
   Elements:
   'H' + 15
   'I' + 2 + i i: Field information.
   'F' + 11 + r * n r: Record size. n: Number of record.

2. Compress is done by packet.

3. Compress or not.
   “n:" is non compress.
   "c:" is compress.

4. How to compress.
   If there is series n bytes 0 (x00h) data, convert to FE, n.
   If n is 1, output 0.
   If FE is there, convert to FE,0.
   Others output as there.

Data sample.

EX820 JP (RF) PLU

```
000000: 6E 3A 50 30 30 30 34 3A  0D 0A 1A 00 00 00 00 00 n:P0004:........
000010: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000020: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000030: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000040: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000050: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000060: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000070: 00 00 00 00 00 00 00 00  00 00 00 00 50 4F 6E 00 ............POn.
000080: 48 1A 01 00 00 06 03 03  13 33 00 02 01 00 00 00 H........3......
000090: 00 00 00 00 00 00 00 00  00 00 49 00 27 00 04 00 ..........I.'...
0000A0: 10 0C 00 03 0D 10 0E 07  10 06 26 03 0F 03 14 03 ..........&.....
0000B0: 16 03 18 03 19 03 1A 01  1B 03 15 02 01 05 02 05 ................
0000C0: 04 05 03 05 46 00 04 01  00 02 00 35 00 01 03 E8 ....F......5....
0000D0: 22 50 4C 55 30 30 30 31  22 20 20 20 20 20 20 20  PLU0001"
0000E0: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
0000F0: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000100: 00 00 00 00 00 50 4C 55  30 30 30 32 20 20 20 20 .....PLU0002
```

QT-6000 (XMODEM CRC1024) PLU compressed.

```
000000: 63 3A 50 30 30 30 34 3A  0D 0A 1A 00 00 00 00 00 c:P0004:........
000010: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000020: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000030: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000040: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
```

```
000050: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000060: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000070: 00 00 00 00 00 00 00 00  00 00 00 00 50 4F 63 00 ............POc.
000080: 48 20 02 FE 02 06 03 03  11 59 FE 03 02 FE 02 49 H .......Y.....I
000090: 00 35 00 04 00 17 11 01  05 06 18 07 07 27 03 08 .5..........'..
0000A0: 03 0B 03 51 03 0D 03 0A  02 30 03 36 01 37 01 31 ...Q.....0.6.7.1
0000B0: 02 38 06 6E 01 6F 01 70  01 71 01 03 05 01 05 02 .8.n.o.p.q......
0000C0: 05 04 05 14 05 1D 05 46  00 04 01 00 03 00 41 00 .......F......A.
0000D0: 01 03 84 50 4C 55 30 30  31 20 20 20 20 20 20 20 ..ΠLU001
0000E0: 20 20 20 20 20 20 20 20  20 20 20 FE 29 50 4C 55            .)PLU
0000F0: 30 30 32 20 20 20 20 20  20 20 20 20 20 20 20 20 002
```

EX274 (XMODEM SUM128) PLU

```
000000: 6E 3A 50 30 30 30 34 3A  0D 0A 1A 00 00 00 00 00 n:P0004:........
000010: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000020: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000030: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000040: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000050: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000060: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000070: 00 00 00 00 00 00 00 00  00 00 00 00 50 4F 6E 00 ............POn.
000080: 48 1D 00 00 00 06 03 03  13 30 00 00 00 00 00 00 H........0......
000090: 49 00 0F 00 04 00 04 04  00 00 07 0C 08 05 0A 01 I...............
0000A0: 09 03 46 00 04 01 00 01  00 15 00 01 02 58 82 A0 ..F..........X あ
0000B0: 82 A9 82 B3 50 4C 55 30  30 30 00 00 00 00 00 00 かさ PLU000......
0000C0: 00 00 00 50 4C 55 30 30  30 32 20 20 20 20 20 00 ...PLU0002     .
0000D0: 00 00 00 00 00 00 00 00  50 4C 55 30 30 30 33 20 ........PLU0003
```

Chapter 10. Error log file (ECR.log) format

You can check ECR.log file for communication utility errors.
All of command appends at bottom of ECR.log file.

Basic format for R/S/S0/X/Z command.
1st line: Command line
2nd line: Result line

Basic format for Job command.
1st line: Job command line.
2nd line: Result line.

1.R/S/S0/X/Z Command line format.
[yy:mm:dd]-[hh:mm:ss] > C_COMBDY.DLL / <<<< parameters >>>>
<<<parameters>>>>

R/S[1]	0:Send / 1:Receive / 2:X receive / 3:Z receive.
Fno[4]	Target file number or X/Z code.
FNAME[file0004.txt]	Target DOS file name
Line[0]	0:Online / 1:Inline / 2:Standard port.
Term[0]	Target terminal number.
PROF[C:¥Cvw¥tkt500.ini]	Ini file name.
Init[0]	0:Without –i option / 1:With –i option.
Text[1]	0:Without text convert / 1:With text convert.
Consol[0]	Now, does not use.

2.Job command, Command line format.
[yy:mm:dd]-[hh:mm:ss] > JOBCMD.DLL / JOBNUMBER[<Job number>]
+ JOBSTRING[<no meaning>]

3.R/S/S0/X/Z and Job command, Result line format
[yy:mm:dd]-[hh:mm:ss] < [Error code] – [Explanation]

Explanation of error code, please see another section.

<Examples>

This page explains ecr.log data sample by each command.

Receive auto program:

```
c:¥cvw>c_comw R file0004.txt 4 -lo -dc:¥cvw¥tkt500.ini -T
01:02:01-17:57:17 > C_COMBDY.DLL / R/S[1] Fno[4] FNAME[file0004.txt] Line[0]
            Term[0] PROF[C:¥Cvw¥tkt500.ini] Init[0] Text[1] Consol[0]
01:02:01-17:57:21 < 0 - Normal End
```

Send auto program:

```
c:¥cvw>c_comw S file0004.txt 4 -lo -dc:¥cvw¥tkt500.ini
01:02:01-17:59:00 > C_COMBDY.DLL / R/S[0] Fno[4] FNAME[file0004.txt] Line[0]
            Term[0] PROF[C:¥Cvw¥tkt500.ini ] Init[0] Text[0] Consol[0]
01:02:01-17:59:04 < 0 - Normal End
```

Receive X data:

```
c:¥cvw>c_comw X x0004.txt 14 -lo -dc:¥cvw¥tkt500.ini -T
01:02:01-18:03:58 > C_COMBDY.DLL / R/S[2] Fno[14] FNAME[x0004.txt] Line[0]
          Term[0] PROF[C:¥Cvw¥tkt500.ini] Init[0] Text[1] Consol[0]
01:02:01-18:04:01 < 0 - Normal End
```

Receive Z data:

```
c:¥cvw>c_comw Z z0004.txt 14 -lo -dc:¥cvw¥tkt500.ini -T
01:02:01-18:04:56 > C_COMBDY.DLL / R/S[3] Fno[14] FNAME[z0004.txt] Line[0]
          Term[0] PROF[C:¥Cvw¥tkt500.ini] Init[0] Text[1] Consol[0]
01:02:01-18:04:59 < 0 - Normal End
01:02:01-18:04:59 > JOBCMD.DLL / JOBNUMBER[5]
                    + JOBSTRING[ ]
01:02:01-18:05:00 < 0 - Normal End
```

* Receive Z data for CE/TK/TE-M† works Z clear job command internally.

Job command

```
c:¥cvw>c_comw J 21 A 0 11 0 -lo -dc:¥cvw¥tkt500.ini
01:02:01-18:06:47 > JOBCMD.DLL / JOBNUMBER[21]
                    + JOBSTRING[ ]
01:02:01-18:06:48 < 0 - Normal End
```

Chapter 11. Protocol

This chapter explains communication protocol for reference.

Please Do Not Use ECR protocol directory, but use communication module.

CASIO will change protocol without notice for upgrade or bug fix.

11-1. Protocol type.

CASIO ECR has following protocols.

- RF Protocol (RS232C)
- XMODEM Protocol (RS232C,TCP/IP)
- CF card file

11-2. RF Protocol

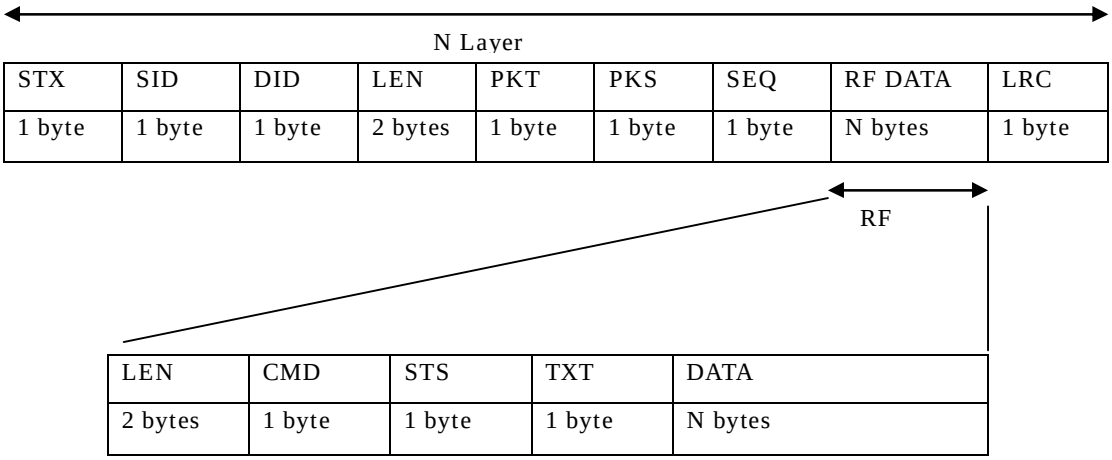
Outline:

RF (remote file) protocol is designed for EX445 JP Model. For international, it is updated for MID range models. RF has RF layer and N layer.

ECR:

International and Japanese MID range models.

DATA:



STX	SID	DID	LEN	PKT	PKS	SEQ	RF DATA	LRC
1 byte	1 byte	1 byte	2 bytes	1 byte	1 byte	1 byte	N bytes	1 byte

LEN	CMD	STS	TXT	DATA
2 bytes	1 byte	1 byte	1 byte	N bytes

STX: AAH fixed
SID: Source terminal ID
DID: Destination terminal ID
LEN: Data size (from PKT to LRC)
PKT: Packet type.
- 00H: Connection type (with ACK response)
- 01H: Connection less type (without ACK response)
- 02H: ACK
- 03H, 05H to FFH: WAK
- 04H: Command response type (with response)

PKS: Packet status.
SEQ: Sequence counter.
- 01H: SYN
- 02H to FFH: Sequence counter.
- 00H: FIN

LRC: Sum o f STX to RFDATA.

Example of handshake (RF): Receive Fixed totalize from TE2400 via RS232C.

```
PC→ECR / SYN
   AA FD 01 0400 04 00 01 57
PC←ECR /
   AA 22 FD 0500 01 00 01 [52] 22
                          R


PC→ECR / APLRF_RD_FINF(0x09)
   AA FD 01 1B00 04 00 02 [1500|09|00|81|6E3A2A3A46494C45303030312020203A003A] B5
                                    ( n : * : F I L E 0 0 0 1 ...)
PC←ECR /
   AA 22 FD A400 01 00 02 [9E00|09|00|81|6E3A88003A481B0100000603021453000101020 0....2020] 63
                                    ( n :     : ...)


PC→ECR / SYN
   AA FD 01 0400 04 00 01 57
PC←ECR /
   AA 22 FD 0500 01 00 01 [52] 22

PC→ECR / APLRF_OPEN(0x02)
   AA FD 01 3100 04 00 02 [2B00|02|00|81|633A443A2A3A010000003AFFFFFFFF3A813A013A46494C4530....00] F0
                                     (c : D : * :        :         :    :  : F I L E 0...)
PC←ECR /
   AA 22 FD 0900 01 00 02 [0300|02|00|81] FF

PC→ECR / APLRF_DATA(0x03)
   AA FD 01 0900 04 00 03 [0300|03|00|81] D9
PC←ECR /
   AA 22 FD E901 01 00 03 [E301|03|00|01|47524F53532020202020204E4554202020202020202043....20] 68
                                     (G R O S S              N E T                   )

PC→ECR / APLRF_DATA(0x03)
   AA FD 01 0900 04 00 04 [0300|03|00|81] DE
PC←ECR /
   AA 22 FD E901 01 00 04 [E301|03|00|00|4653494420202020202020204653434143472020202020 2045....20] 63
                                   ( F S I D                F S C A C G            E B...)

PC→ECR / APLRF_DATA(0x03)
   AA FD 01 0900 04 00 05 [0300|03|00|81] DF
PC←ECR /
   AA 22 FD ED00 01 00 05 [E700|03|00|80|5441352020202020202020205458352020202020202020 ....58202020] EE
                                   (T A 5                   T X 5..... )

PC→ECR / APLRF_CLOSE(0x04)
   AA FD 01 0B00 04 00 06 [0500|04|00|81|0000] DF
PC←ECR /
   AA 22 FD 0B00 01 00 06 [0500|04|00|81|0000] F9
```

11-3. XMODEM CRC1024

Outline:

XMODEM CRC1024 protocol is designed for VHS, based on standard XMODEM protocol and fixed for ECR. XMODEM CRC1024 Works on RS232C and Inline (TCP/IP).

ECR:

QT and MID-HIGH range.

DATA:

There is two phase and inline end phase.

- Command phase.
  Send request command from PC to ECR.

LEN	CMD	STS	TEXT	Command
2 bytes	1 byte	1 byte	1 byte	n byte

- Data phase.
  If command is send request, send data from PC to ECR. If command is receive, PC receive data from ECR. Data is basically binary, which is before text converted.
  If command is JOB, send JOB command from PC to ECR.

LEN	CMD	STS	TEXT	DATA
2 bytes	1 byte	1 byte	1 byte	n byte

- End phase (Inline only)
  If PC is send mode, send end data from ECR to PC.
  If PC is receive mode, send end data from PC to ECR.

LEN	CMD	STS	TEXT
2 bytes	1 byte	1 byte	1 byte

LEN: Data size from CMD to DATA.
CMD: Packet command.
1: Command phase.
2: Data phase.
3: End phase (Inline only)
STS: Status
0: Normal.
Others: Something error depend on CMD.
TEXT: First/Last
bit0: First packet.
bit7: Last packet.
DATA: Command or record data.
Basically binary data without 128bytes header.

Example of handshake (XMODEM CRC1024): Receive Fixed totalize from QT via RS232C.

```
PC→ECR / DTR ON

PC←ECR / C (Command phase)
   43
PC→ECR / COMMAND
   01 01FE [0D00|01|00|81|633A50303030313A00FF1A1A1A1A1A1A1A1A1A1A1A1A1A1A...1A] CBE9
                          c : P 0 0 0 1 :
PC←ECR / ACK
   06
PC→ECR / EOT
   04
PC←ECR / ACK
   06

PC→ECR / C (Data phase)
   43
PC←ECR / DATA1
   02 01FE [FE03|02|00|01|482002FE020603021551FE0302FE0249000D000100030100020610....00] 2DC4
PC→ECR / ACK
   06
PC←ECR / DATA2
   02 02FD [8301|02|00|80|5441352020202020202020202020205458352020202020202020....1A] 2DC4
PC→ECR / ACK
   06
PC←ECR / EOT
   04
PC→ECR / ACK
   06
```

In case of PC send mode, C is sent from ECR first and data is sent from PC.

Example of handshake (XMODEM Inline): Receive Fixed totalize from QT via Inline.

```
PC→ECR / COMMAND
[0E00|01|00|81|63 3A 50 30 30 30 31 3A 0D 0A 1A]
                c  :  P  0  0  0  1  :

PC←ECR / DATA
[EE01|02|00|01|48 20 01 FE 02 06 03 06 11 35 FE 03 ...]
[E301|02|00|80|.....]
        *  TCP/IP is stream protocol, then actual monitor data is not same.

PC→ECR / END
[0300|03|00|81]
```

Example of handshake (XMODEM Inline): Send PLU to QT via Inline.

```
PC→ECR / COMMAND
[0E00|01|00|81|63 3A 53 30 30 30 30 3A 0D 0A 1A]
                c  :  S  0  0  0  0  :

PC→ECR / DATA
[F101|02|00|01|48 20 01 FE 02 06 03 06 11 35 FE 03 ...]
[nnnn|02|00|00|.....]
[nnnn|02|00|80|.....]
        *  TCP/IP is stream protocol, then actual monitor data is not same.

PC←ECR / END
[0300|03|00|81]
```

11-4. XMODEM SUM128

Outline:

XMODEM SUM128 Protocol is designed for low-end models based on XMODEM CRC1024. XMODEM SUM128 is same as CRC1024, except data size, C/NAK and check sum.

ECR:

LOW-END ECR.

DATA:

Same as CRC1024

Example of handshake (XMODEM SUM128): Send Fixed tantalizer to TE300 via RS232C.

```
PC→ECR / DTR ON

PC←ECR / NAK (Command phase)
   15
PC→ECR / COMMAND
   01 01FE [0D00|01|00|81|6E3A53303030303A00F11A1A1A1A1A1A1A1A1A1A1A1A1A1A1A....1A] EF
                          n : S 0 0 0 0 :
PC←ECR / ACK
   06
PC→ECR / EOT
   04
PC←ECR / ACK
   06

PC←ECR / NAK (Data phase)
   15
PC→ECR / DATA
   01 01FE [7E00|02|00|01|4811000000000000000000000002000049000900010000000000...20] 0F
PC←ECR / ACK
   06
PC→ECR / DATA
   01 02FD [7E00|02|00|00|2020202020202020202020202020202020202020202020202020....C1] 21
PC←ECR / ACK
   06
PC→ECR / DATA
   01 03FC [7E00|02|00|00|94EF90C59399202020208FC194EF90C58D878C76202094F189DB....8F] 54
PC←ECR / ACK
   06
PC→ECR / DATA
   01 04FB [1600|02|00|80|912088F38E862097CC8EFB8F9120202020202201A1A1A1A1A1A....1A] 54
PC←ECR / ACK
   06
PC→ECR / EOT
   04
PC←ECR / ACK
   06
```

11-5. CF card

CF card means AUTOPGM file convert to/from TEXT and X/Z file convert to general CASIO X/Z format.

11-5-1. S command – PC to CF card with TEXT to BINARY convert.

```
>c_comw  S  myfile.txt  cffile.001  -lc  -dQT6600.INI
```

Action:

C_comw read “myfile.txt” which is specified command filename, and output “cffile.001” under folder specified on INI file [CF] section. If “myfile.txt” is TEXT file, output with binary convert.

Caution:

- “myfile.txt” is CASIO standard TEXT format file.
- “myfile.dat” is also OK if CASIO standard binary format which works as COPY.
- RF protocol create AUTOPGM (9xx) is not supported.
- QT/HIGH S0 command is same as S command. (No meaning).
- If specified output file already exist, C_comw override that file.
- RF protocol scanning PLU index is also appended automatically.

11-5-2. R command – CF card to PC, with TEXT converts.

```
>c_comw  R  myfile.txt  cffile.001  -lc  -dQT6600.INI -T
```

Action:

C_comw read “cffile.001” under folder specified on INI file [CF] section, TEXT convert if –T option and output to “myfile.txt”.

Caution:

- RF protocol scanning PLU index is not output.

11-5-3. X and Z command – CF card to PC.

```
>c_comw  X  myfile.txt  060811¥cffile.txt  -lc  -dQT6600.INI
>c_comw  Z  myfile.txt  2006¥06¥cffile_11.csv  -lc  -dTE2200.INI
```

Action:

C_comw read “060811¥cffile.txt” under folder specified on INI file [CF] section, copy or convert and output to “myfile.txt”. If CF file is not CASIO standard X/Z format witch is same as QT, convert CASIO standard format.

Caution:

- ECR preset should not be “Append character or scanning code”.

11-5-4. JOB, IPL, Create.

No support CF command.

11-5-5. CF card folder

CF card folder name has “CASIO”, machine name and AUTOPGM or XZ.

AUTOPGM:
Preset file is under AUTOPGM folder.
Example) ¥CASIO¥BT4000¥AUTOPGM¥[file]

X/Z – QT series:
X/Z file is under XZ¥[yymmdd] folder.
Example) ¥CASIO¥BT4000¥XZ¥060210¥[file]

X/Z – TE-Low:
X/Z file is under XZ¥[yyyy]¥[mm] folder.
Example) ¥CASIO¥TE2224¥XZ¥2006¥02¥[file]

11-5-6. CF card file name

File name includes file number, type and terminal number.

AUTOPGM:
filename.kkk
kkk:File number. Also 9xx possible.
Example) FILE001P.001
Example) mypluP.904
Example) backup.900

XZ CASIO standard – QT series
XkkkTtt.TXT
X:XorZ
kkk:File number,
tt:Terminal number.
If same file number is exist, append A,B,C,etc on file name.
Example) X001T01.TXT
Example) Z004T01.TXT
Example) Z005T01B.TXT

XZ TE-Low
Xkkk_dd.CSV
X:X or Z
kkk:File number.
dd:Day
If same file number is exist, append A,B,C,etc on file name.
Example) X001_10.CSV
Example) Z004_21.CSV
Example) Z005_31B.CSV

11-5-7. Different format between ECR type

CF card AUTOPGM file is same binary format for all of CASIO ECR models.
CF card X/Z file is not same format between different ECR models.

AUTOPGM:
CASIO standard binary format.

X/Z file for QT – CASIO standard X/Z format.

```
"C","n:X0015"
"H","32","01","0000","060210","1616","0000","00","02"
"F","FILE005","X","D","0001"
00001,0.0000,0.00,0.00
00002,0.0000,0.00,0.00
00003,0.0000,0.00,0.00
00004,0.0000,0.00,0.00
```

XZ file for TE-Low

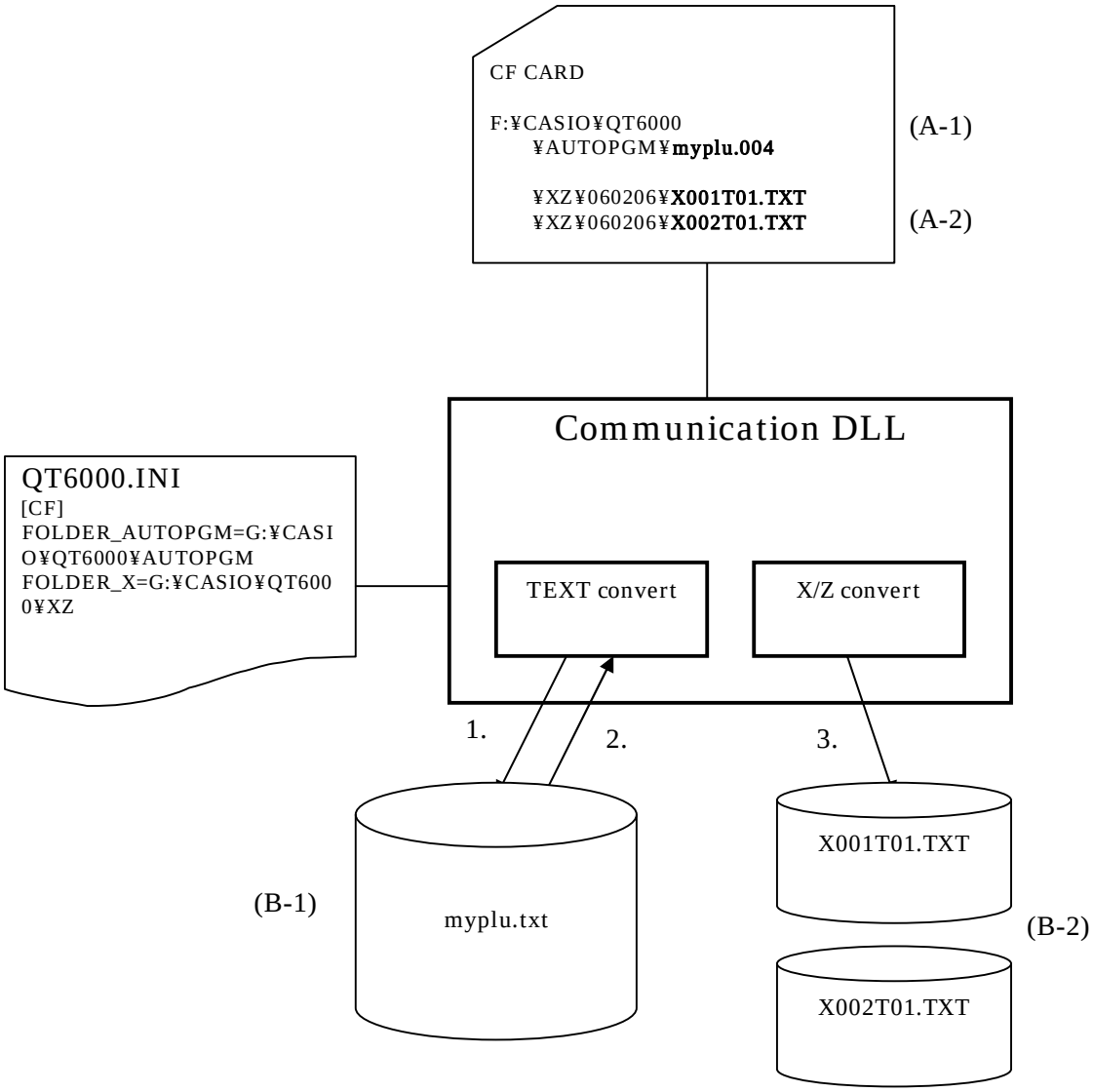
```
"MODEL          ","TE-2400         "
"MACHINE        ","MC#01   "
"REPORT         ","DEPT        "
"FILE           ","FILE005"
"MODE           ","X   "
"Z COUNTER      ","0001"
"DATE           ","02-28-2006"
"TIME           ","14:19"

"RECORD           ","QUANTITY         ","AMOUNT           ","DISCOUNT         ","OLD AMOUNT
","RED AMOUNT     ",
"0001","0","0.00","0.00","0.00","0.00"
"0002","0","0.00","0.00","0.00","0.00"
```

X/Z text file is specified if top of file is ”C”, it is CASIO standard format, another format is TE-Low.

CASIO standard X/Z format is same as received by ONLINE from MID range ECR.

11-5-8. QT CF converts flow.



1: c_comw R myplu.txt myplu.004 -lc -dQT6600.INI -T
2: c_comw S myplu.txt myplu.004 -lc -dQT6600.INI
3: c_comw X X001T01.txt 060206¥X001T01.txt -lc -dQT6600.INI

11-5-9. QT CF converts sample.

(A-1) CF card AUTOPGM file example

```
000000: 6E 3A 50 30 30 30 34 3A  0D 0A 1A 00 00 00 00 00 n:P0004:........
000010: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000020: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000030: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000040: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000050: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000060: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000070: 00 00 00 00 00 00 00 00  00 00 00 00 50 4F 6E 00 ............POn.
000080: 48 20 20 00 00 06 02 14  19 25 00 00 00 02 00 00 H  ......%......
000090: 49 00 29 00 04 00 11 11  00 00 06 18 07 07 27 03 I.)..........'.
0000A0: 08 03 0B 03 51 03 0D 03  0A 02 30 03 36 01 37 01 ....Q.....0.6.7.
0000B0: 31 02 38 06 6E 01 6F 01  70 01 71 01 46 00 04 01 1.8.n.o.p.q.F...
0000C0: 00 01 00 41 00 01 03 84  50 4C 55 30 30 31 20 20 ...A... PLU001
0000D0: 20 20 20 20 20 20 20 20  20 20 20 20 20 20 20 20
0000E0: 00 00 00 00 00 00 00 00  00 00 00 10 00 00 00 00 ................
0000F0: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00 ................
000100: 00 00 00 00 00 00 00 00  00 50 4C 55 30 30 32 20 .........PLU002
```

(A-2) CF card X/Z data example

```
"C","n:X0015"
"H","32","01","0000","060210","1616","0000","00","02"
"F","FILE005","X","D","0001"
00001,0.0000,0.00,0.00
00002,0.0000,0.00,0.00
00003,0.0000,0.00,0.00
00004,0.0000,0.00,0.00
00005,0.0000,0.00,0.00
```

(B-1) c_comw convert AUTOPGM data sample

```
"C","n:P0004:"
"H","32","20","0000","060214","1925","0000","00","02"
"F","FILE004","P","P","0001"
00001,"PLU001                    ","00000000000000","000000","001000","000000","000000"···
00002,"PLU002                    ","00000000000000","000000","001000","000000","000000"···
00003,"PLU003                    ","00000000000000","000000","001000","000000","000000"···
```

(B-2) c_comw X/Z data sample.

```
"C","n:X0015"
"H","32","01","0000","060210","1616","0000","00","02"
"F","FILE005","X","D","0001"
00001,0.0000,0.00,0.00
00002,0.0000,0.00,0.00
00003,0.0000,0.00,0.00
00004,0.0000,0.00,0.00
```

11-5-10. MID-Low CF converts sample.

AUTOPGM data is same as QT.

CF X/Z data smple.

```
"MODEL          ","TE-2400         "  > ECR presettable.
"MACHINE        ","MC#01   "          > ECR presettable.
"REPORT         ","DEPT        "     > Except GT file
"FILE           ","FILE005"       [1]
"MODE           ","X   "          [2] > ECR fixed character depend on language.
"Z COUNTER      ","0001"          [3]
"DATE           ","02-28-2006"    [4] > Order is depend on general pgm.
"TIME           ","14:19"         [5]

"RECORD          ","QUANTITY        ","AMOUNT          ","DISCOUNT        ","OLD AMOUNT      ","RED AMOUNT
",
"0001","0","0.00","0.00","0.00","0.00"
"0002","0","0.00","0.00","0.00","0.00"
```

C_comw X/Z converted data

```
"C","n:X0005:"
"H","26","01","0000","020206","1419","0001","00","00"
"F","FILE005","X","D","0001"
00001,0,0.00,0.00,0.00,0.00
00002,0,0.00,0.00,0.00,0.00
00003,0,0.00,0.00,0.00,0.00
```

TE-2400 class CF XZ data is EXCEL CSV format, then c_comw convert to CASIO standard text format. Because for use standard application which request same X/Z format for all of CASIO.

Use TE-2400 class CF X/Z general PGM should be “without character”. Even if “without character”, clerk and hourly data has character then communication DLL ignore those character field.

```
"C","n:Z0005:"
       ↖ ↖ [1]FileNo
[2] X/Z

"H","26","01","0000","060210","1517","0004","00","00"
      ↖              ↖      ↖      ↖
   [6] MCID        [4] Date  [5] Time  [3] System Z counter

"F","FILE005","Z","D","0004"
      ↖          ↖           ↖
                              [3] Z counter
 [1]FileNo    [2] X/Z
```

11-6. FTP

Outline:

ECR FTP protocol is almost same as standard FTP for connect ECR FTP server.
This section explains inside of communication library use with FTP protocol.

ECR models:

QT

Data type:

Support Data type is binary and text as CASIO standard format.

Operation:

(1) S command (send)

Exaple) c_comw S myfile.txt 4 -lf -nMYEX820 -pMYPASS -dQT6600.INI -T -t1

Protocol:

Target ECR	-t Target ECR witch IP address is defined by INI file ECRxx keys.
Use name	-n Specified string witch is same as programmed ECR.
Password	-p Specified string witch is same as programmed ECR.
Control	STORE FILE004P.TXT FILE004P.TXT is file name ECR understand.
Data	Send myfile.txt to ECR.
Error	Success: Message include 226. Ex. 226 Transfer complete. Error: Error message. Ex. 553 Request action not taken. Start communication: Message include 150. Ignored.

(2) R/X/Z command (receive)

Example) c_comw R/X/Z myfile.txt 4 -lf -nMYEX820 -pMYPASS -dBT4000.INI -T -t1

Protocol:

Target ECR	-t Target ECR witch IP address is defined by INI file ECRxx keys.
Use name	-n Specified string witch is same as programmed ECR.
Password	-p Specified string witch is same as programmed ECR.
Control	RETR FILE004P.TXT FILE004P.TXT is file name ECR understand. -T means receive as TEXT format. without –T means receive binary format. (suffix is DAT)
Data	Write received data to myfile.txt.
Error	Success: Message include 226. Ex. 226 Transfer complete. Error: Error message. Start communication: Message include 150. Ignored.

(3) JOB command

Example) c_comw J 21 A 0 14 1 -lf -nMYEX820 -pMYPASS -dBT4000.INI -t1

Protocol:

Target ECR	-t Target ECR witch IP address is defined by INI file ECRxx keys.
Use name	-n Specified string witch is same as programmed ECR.
Password	-p Specified string witch is same as programmed ECR.
Control	STORE J_JOB.TXT J_JOB.TXT is fixed file name for JOB command.
Data	J_JOB.TXT has job command string.
Error	Success: Message include 226. Ex. 226 Transfer complete. Error: Error message.

Start communication: Message include 150. Ignored.

About “J_JOB.TXT”.
This file has command line string except option switchs.
End of line must have crlf. (0x0d,0x0a).
c_comw J 21 A 0 14 1 -lf -nMYEX820 -pMYPASS -dBT4000.INI
→ J 21 A 0 14 1[CrLf]

(4) Response type JOB command.
This means JOB 23.
Example) c_comw J 23 -ores -lf -nMYEX820 -pMYPASS -dQT6600.INI -t1
Protocol:

Target ECR	-t Target ECR witch IP address is defined by INI file ECRxx keys.
Use name	-n Specified string witch is same as programmed ECR.
Password	-p Specified string witch is same as programmed ECR.
Control	RETR JOBRES.DAT JOBRES.DAT is fixed file name.
Data	Output to file (specified –o option) contents of JOBRES.DAT
Error	Success: Message include 226. Ex. 226 Transfer complete. Error: Error message. Start communication: Message include 150. Ignored.

Support FTP command:

USER *username*
PASS *password*
PORT *ipaddress_port*
RETR *ex820filename*
STOR *ex820filename*
QUIT

ECR file name (Protocol level):

ECR understand request by file name witch are file number, text/binary and X/Z or PGM.
This file name is protocol level then communication library output file name is not same.

(1) PGM (S/R command)
Text: FILEfffP.TXT (fff is file number. same as command line)
Binary: FILEfffP.DAT (fff is file number. same as command line)
Text/Binary is selected by –T.

(2) X (X command)
XkkkTtt.TXT
kkk is X file number. (not X/Z code)
tt is terminal number.

(3) Z (Z command)
ZkkkTtt.TXT
kkk is Z file number. (not X/Z code)
tt is terminal number.

(4) JOB command
J_JOB.TXT (Fixed name)
JOB command string is set at J_JOB.TXT file automatically.

(5) JOB response file (J 23 response)
JOBRES.DAT (Fixed name)

Response data is set JOBRES.DAT.

(6) X/Z file number.
X/Z command line number is X/Z code, but FTP file name is file number.
X/Z code – 10 = file number.
Ex. PLU: 14 -> X004T01.TXT
Ex. M&M: 61 -> Z051T01.TXT

But some file are not file number.
Clerk: 17 -> X011T01.TXT
PLU Stock: 64 -> X064T01.TXT

Error:

It possible following errors.
- Connect time out.
- Login name is wrong.
- Password is wrong.
- Specified file number is not ECR file.
- ECR receive timeout.
- ECR send timeout.
- User break;

Login/Password:

ECR must be set Login and Password before use FTP.
Communication Library must specify Login and Password by –n and –p switch.

Example: - FTP protocol: Send fixed totalizer to ECR.

Use PORT is same as standard FTP. ECR control PORT is 21, Data PORT is 20. c_comw Data PORT is defined INI file.

File receive:

c_comw side	—	EX820 (FTPd) side
connect	→	(port:21)
(port:Control)	←	"220 FTP Service (Version 1.0) ready…."
"USER A"	→	(port:21)
(port:Control)	←	"331 User name okay, need password."
"PASS A"	→	(port:21)
(port:Control)	←	"230 User logged in, proceed."
"PORT 129,1,51,168,5,195"	→	(port:21)
(port:Control)	←	"200 Command successful."
"STOR FILE004P.TXT"	→	(port:21)
(port:Control)	←	"150 Opening data connection."
(port:DATA)	←	connect(port:20)
(port:DATA)	←	DATA**1**
(port:DATA)	←	DATA**2**
(port:DATA)	←	DATA**n**
(port:DATA)	←	close
close	→	(port:20)
(port:Control)	←	"226 Transfer complete."
"QUIT"	→	(port:21)
(port:Control)	←	"221 FTP Service (Version 1.0) closing……."
(port:Control)	←	close
close	→	(port:21)